THE FARMERS' CABINET,

AND

AMERICAN HERD-BOOK,

DEVOTED TO

AGRICULTURE, HORTICULTURE, AND RURAL AND DOMESTIC AFFAIRS.

"The Productions of the Earth will always be in proportion to the culture bestowed upon it."

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For the Farmers' Cabinet.

Cultivation of the Soil.

Mr. Editor,—How little is the thorough cultivation of the soil either understood or practised! We think if we turn down the surface of the land, sow our seed and harrow it over, all has been done that is necessary, and we have a right to the reward of our labours—which, in sooth, we are pretty sure to obtain, for where but little is bestowed but little can be obtained. Now I sincerely believe, that thorough cultivation would go very far to rid us of the ten thousand ills that farmers have to complain of; but by this I do not mean the mere routine of replacing by others the crops as they are removed, or even a periodical cleaning and manuring, but a systematic stirring of the soil at all seasons, when we have the opportunity—ploughing and harrowing for weeds, as some one has it.

In that noble work, Tull's horse-hoeing husbandry—the text-book of every good farmer—we find this principle carried out to its fullest extent; and the century that has passed since its first publication, has added the experience of a hundred years to the justness of the theory: it may be, that many consider the doctrine of pulverization there insisted upon, as carried to the extreme—as entailing an expense that the present state of agriculture would not warrant, but that is not the question; it is, is the principle there laid down beneficial or otherwise, to the improvement of the soil and the growth of the crop? And I must confess that I have never met with the man who considered it *injurious*. As I say, many believe it a labour which cannot be made to pay the expense; but, so far as I know, all agree in considering it a *harmless employment*, and, when pushed upon the subject, will admit that the objection to it as a system, is its expense in the operation. Now if we could agree on this view, I think all that is required in the way of theory would be obtained, and we might then be led to practise—to a greater extent than we now do, at least—the principles which we felt convinced were based on common sense and right reason, without fear for the result; and although I am willing to admit, that it is possible to buy even gold too dear, I think we might go very much farther in our purchase than we have hitherto ventured, without fear of overtrading.

Your pages, Mr. Editor, have of late been devoted to the laudable purpose of urging upon your readers the necessity of using every exertion to increase, by all means, their quantity of manure; and, without it, little *will* be done, after all that Tull has written and said about it; but I believe, sincerely, that infinitely more benefit might be derived from one-half the quantity of manure now usually expended, if it were accompanied by a double or treble portion of tillage—by which I mean a thorough pulverization and cleaning of the soil, at all proper intervals.

A writer in the number of the Cabinet for November, while enjoining upon farmers the necessity of keeping their lands clear of weeds, reminds *himself* of the pleasure he has in store, while carrying his manure to his field, a mile distant, in reflecting that one-half of it will go to the support of the weeds, and by which they will be so strengthened as to outgrow his crop of grain—to its deterioration both in quantity and quality—to the amount of half the remainder! And I do not consider that this is an unfair statement, for "the land *will* produce a crop of something, and it depends entirely upon the farmer what that shall be, whether a crop of grain or of weeds." So that this view of the subject makes the value of clean cultivation amount to about three parts out of four; while, by removing the weeds and pulverizing the soil, we prepare it for receiving the benefit of the manure which we have to bestow upon it, rendering it of threefold importance to the present, as well as to future crops; and from actual experience, it is not considered that the above estimate is more in favour of thorough cultivation than the truth will warrant.

Four years ago, I came into possession, by purchase, of a field of five acres, adjoining my present farm; it had long been tenanted

—I cannot call it *farmed*—by a man who had regularly sowed it every year with grain of some sort, but he never manured it, as he conceited he should remove to the west next year, and then some one else would reap the fruit of his labour—he never weeded his crops for the same reason—adding, "where is the fun of working for other folks?" For a small consideration, he gave me possession of the land immediately after he had carried his crop of wheat, which yielded but eight bushels per acre—not quite the quantity, perhaps, of the seeds of the weeds which he left behind him, two feet in height, and covering the land like a carpet; but amongst these was buried the stubble of the wheat-crop, which had been cut so high, because of the weeds. By the time I had completed the fence, which was in many places flat with the ground, the season for sowing rye having arrived, I dragged both weeds and stubble, and, with one of Prouty's long ploughs, going the way which the harrows had passed, the whole was turned down with a clean furrow to the depth nearly of the beam; the land was then broken down with the harrows, and sown with three bushels of rye to the acre, covering it with four harrowings in a place, and finishing by a slight rolling. The crop came up strong, owing to the great depth of fresh soil which had been turned up, but not half the quantity of weeds that had been expected, for the same reason. The spring was early, and in May I cut the crop of rye, while green, feeding a part to my cattle and selling the remainder to the cow-keepers, my object being to clear the land for immediate cultivation, and which was done, by turning it exactly to the depth to which it had been broken up for the rye, thus the old surface was returned to the top; harrowed it four times in a place, and awaited the result—a crop of weeds inconceivable—but as I had no intention of "going to the west," I was down upon them so soon as I found that they had all fairly vegetated, turned them to the depth of the new-formed staple of the soil, and harrowed again for weeds, which grew by tens of thousands, paying me most handsomely for my labour, for, as Colonel Smith observes, "they were the only crop on the land," and indeed it was a thundering one! but they soon found themselves consigned to an untimely grave, and four more harrowings was all the labour which I had to bestow for another crop of weeds, which, however, was most strangely diminished, both in quantity and *quality*—indeed, not half a crop, weak and sickly; I therefore commenced carrying abroad upon them a large quantity of dung and compost, which I had prepared during the winter, taking it from the yard as occasion served, and placing it in a corner of the field, convenient for carrying out; and when it had been very carefully spread, it was turned in by the same plough—which I take the opportunity of recommending for this purpose, as it left not a particle of the manure remaining on the surface—the land was then spread with 50 bushels of lime to the acre, well and carefully slaked, and evenly distributed, and, after a good harrowing, one-half the piece was drilled with the common large turnip, the other with rutabaga, the whole being finished by a light rolling. The crop was kept clean, and proved astonishingly great; the common turnips were first fed to my stock of cattle and sheep, the rutabagas being carefully housed for the winter; and the moment they were removed from the land, it was sown, after one very careful ploughing to a good depth, with wheat—a late seed-season, but the crop proved most abundant, with the straw clean and free from rust. Grass seeds were sown upon the wheat in the spring, the object being to get the land into meadow, and I have never in my life—now a pretty long one—seen any management that succeeded so well, or paid so liberally for the expenses incurred.

Now, this success was owing entirely to the perfect cultivation which the land had received; by over-cropping, the soil had become as poor as Job, and a rank wilderness of weeds; the coat of manure was by no means a heavy one—not half sufficient for the decent maintenance of the crop of weeds that had been so long the tenants of the soil—and the lime had no other matter to operate upon, for no man on earth had ever less cause to tax himself with the iniquity of having poisoned his soil with manure, than he, the former occupier; but then, every particle of it was taken up by a profitable plant, and appropriated to a right purpose.

And now, I must be indulged with a little theory of my own, by way of reward for the labour which I have bestowed on putting pen to paper—a task far more irksome than ploughing an acre of land, and requiring more dexterity in guiding the *instrument*; but if you will close up the furrows a bit, and fill up the hollows, harrowing four times in a place and picking out the weeds, a crop may come—who knows?—that might, after all, be worth the reaping, chaffy although it might be.

Well then, I believe that the clean and beautiful appearance of my wheat crop, at a time when all my neighbours were complaining of mildew, blight, smut, rust, and about a dozen other evils, arose entirely from my manuring and liming for a *preceding crop*, and not for the wheat. And another little idea I have, which is, that by spreading my lime on the surface of the land, from which a coat of

manure had been turned in, it had the effect —by means of its antiseptic property, of retarding the too sudden decomposition of its component parts, by which a considerable portion of its strength was preserved for the support of the wheat crop, the turnip crop having consumed the grosser particles* of the manure, which would have gone to encourage a premature autumnal growth in the wheat, to the manifest injury of the crop, rendering it more liable to be affected by the unkindly changes of the atmosphere during its future progress of growth — I mean, in the way which your correspondent "Vir" points out, if I could only express myself—and as it begins to be pretty well understood that lime does not act until it becomes soluble—in other words, it is the *lime-water* which operates upon the crops—I think it clear, that the best way to apply lime, is to spread it upon the surface of the land, so that the rain, when it descends to the roots of the plants, may carry with it lime in solution, just in that particular state which is best adapted to the purpose for which it is destined. Now that, in the language of a ploughman, is about as plain as I can make my meaning. And with this view of the subject, I have covered the surface of the earth in my daughter's flower-pots with mild or slaked lime, and I conceit that every time they are watered, a portion of the soluble matter or lime-water is conveyed to their roots in the only state in which it can be taken up by them; and judging by their appearance, I guess I am pretty near right.

I remember, many years ago, a person who owned a piece of rough land on the side of a hill, determining to build a house upon the spot; he therefore carried a load of lime and dropped it there, intending it for mortar; but, owing to some cause, he did not put his intention into execution, and there the lime lay, unspread for many years; during this time I had almost daily opportunity of witnessing the effect produced by the washing of the heap during heavy rains; a long, narrow strip of evergreen grass extended for above fifty yards from the heap of lime down the side of the hill, the herbage of which was very different from that of the lands adjoining, white clover predominating; the sheep kept on the hill were almost always feeding this spot, in consequence of the sweetness of the grass, and, on examination, it was found thickly covered with their dung; thus the lime in solution was continually passing over a bed of the richest manure, extending the boundaries of this delightful little patch, which could be distinguished by its colour, miles distant. Now, none of this lime was ever turned under the sod, so that all the benefit had been communicated by water flowing from the lime, and which, for years after, was found to be as highly saturated with the lime as it had been the day when it was first deposited on the land.

But I must stop, for I find that my plough-irons are so much worn, that it is difficult to keep my *instrument* in the ground, without raising the handles so high as to bring its mould-plate into a position unsuitable to turn the furrow to its proper situation, so I bid you farewell for the present.

JACOB CHANDLER.

* "Whatever devastation may be committed by the fungus tribe to trees or plants, by far the greatest extent of injury from what is placed to the account of canker, mildew, &c., if correctly investigated, will prove to originate in the unwholesome supply or impurity of food."

For the Farmers' Cabinet.

Sowing Grass Seed.

THICK AND EVEN, NOT THIN AND IRREGULAR, IS THE TRUE INTEREST.

ONE of the most frequent errors in agricultural operations, is sowing grass seeds too thin and unevenly; great is the loss in either case, while nothing is easier than to remedy both. In the spring of 1838, clover-seed was very scarce and dear; some sowed none, and others scattered it as thin as possible over the ground, and the effects of this proceeding have been visited with great severity on the delinquents. There has been a deficiency of hay and pasture, a thin, bare sod to plough down; the manure heap has shrunk in its dimensions for want of provender, and the subsequent crops have been proportionably starved and diminished. This season clover-seed is very abundant, cheap and of good quality, and it might be well for the provident to lay in a store against a season of scarcity and high prices, and this may readily be accomplished by putting it in a tight, dry cask, through the bung-hole, and bunging it up and keeping it in a dry place, where it is believed it will remain good for several years to come. Clover should be one of the grasses sown, but other seeds should always accompany it, as there is a larger crop where several kinds of grasses are grown together, sometimes the season being favourable to one and not to another. Many farmers begin to think it more profitable to raise orchard grass than timothy, where selling of hay is not intended, as it furnishes more pasture, both early and late, and is equally good, if not better, for home use as hay. Timothy bears a higher price in the market than other kinds of hay, and the reason probably is, that horses eat less of it in a given space of time, as it is a good deal of work to chew it; hence, tavern-keepers uniformly prefer it, being for them more economical. P. D.

For the Farmers' Cabinet.

Lime.

WHETHER BENEFICIAL OR INJURIOUS TO CORN.

Mr. Editor,—Many of the farmers of this neighbourhood, and those especially who lime their land most abundantly, have, in a great measure, abandoned the cultivation of corn, from an impression that the presence of lime in the soil, in any considerable quantity, is injurious to its growth. I have heard it remarked, by those who entertain this opinion, that when corn, which is planted on such soil, first makes its appearance above ground, its blade will exhibit a dark green colour, and that, as it advances in growth, the leaves become striped, and in some instances acquire a pale unnatural complexion, nearly white. I have noticed a similar appearance of the corn this season, in some small portions of a field of my own, which, notwithstanding, grew and matured, and produced sound corn, but much inferior in quantity and quality to that, on the same field, not similarly affected. This field received a dressing of lime five years since, at the rate of sixty bushels to the acre, previously to which it had been neglected for a number of years, and was so much exhausted, that its produce would not repay the labour and expense of cultivation. For several years before it was limed it had been used as a pasture field, and lay a sort of neglected common, on which little other than blue grass could be seen. This field contained fourteen acres, and yielded, of corn, the first year after it had been limed, one hundred and seventy-five bushels of ears, and very inferior withal. The succeeding crop was wheat, which had been sown on open fallow, after a dressing of barn-yard manure, at the rate of eight four-horse cart-loads to the acre, and yielded four hundred and eighty bushels. Then followed a crop of rye, after which it lay one year in grass, which was used as pasture. Last fall this field was ploughed, preparatory to a crop of corn, and, after being twice harrowed in the spring, was planted in corn, without any additional manure, and the crop, which is just harvested, amounts to thirteen hundred and fifty bushels in the ear, and may be estimated at six hundred and fifty bushels of shelled corn. This field is slightly undulating, with a gentle exposure to the south, and has what we farmers denominate a limestone soil with a clay bottom; and had the corn not suffered an injury in any part, the yield would probably have exceeded seven hundred bushels, or fifty bushels to the acre. Under the circumstances, I am unable to decide whether the improvement in my last crop of corn, and its increase over the former, is to be ascribed to the virtue of the lime, which had been laid on previously to the growth of the former crop, or to that of the barn-yard manure, which had been subsequently applied; or whether the partial injury of my crop the present season is to be attributed to the lime, or to some other cause.

These remarks are made with a view to attract the attention of farmers to this subject, and elicit reports of such experiments as have been made in this particular, tending either to confirm or confute the opinion, that lime is injurious to the growth of corn, as it is of vast importance to farmers that they should be undeceived in this matter, and convinced of their mistake, if their prejudices against lime in this respect are unfounded.

I have noticed that a very excellent crop of corn, and perhaps the best that has been raised in this neighbourhood the present season, was planted on a clover-lay, which was ploughed in the spring, and limed at the rate of fifty bushels to the acre. The lime was harrowed in immediately before planting.—The corn has not been carefully measured, but in my estimation falls little short of 70 bushels to the acre throughout. P. W.

Northampton County, Nov. 28, 1840.

Farming.

If one-half the zeal, energy and expense which have been exhibited for electioneering purposes were bestowed upon agriculture—if the people were half as anxious to improve and beautify their fields, and half as angry with their thistles, thorns and bad fences, as they are with their political opponents, we should have more productive fields, less complaint of poverty, more ability for charity, and abundantly more good feeling. From Maine to Georgia the son ploughs as his father did before him, and the great mass of farmers are as stationary in theory as they are in practice; nine in ten believe at this moment that book-farming is the mere, useless, visionary dreaming of men that know nothing of practical agriculture. The real benefactor of mankind is he who causes two blades of wheat to grow where one grew before; his fields are his morn and evening theme, and to fertilize and improve his farm is his prime temporal object. All national aggrandizement, power and wealth may be traced to agriculture as its ultimate source—commerce and manufactures are only subordinate results of this main-spring.

We consider agriculture as every way subsidiary, not only to abundance, industry, comfort and health, but to good morals and ultimately even to religion. We regard the farmer, stripped to his employment and cultivating his lands, as belonging to the first order of *noblemen*; we wish him bountiful harvests, and invoke upon him the blessing of God in all his undertakings; may peace be within his walls.—*Selected.*

To the Editor of the Farmers' Cabinet.

Berkshires, no longer Berkshires.

Mr. Editor,—I am an old hog-breeder, and have always supposed that I knew a thing or two, but I confess that I am now all at sea on that subject. The time was when a good hog was not measured by the number of white feet which he possessed, or the quantity of white hair that he sported in his tail, but by something of much more importance: I find, however, we were all wrong—no Berkshire can be a Berkshire with less than three white feet and a white top to his tail—"so says the book, and therefore it is true."

Now, I have observed, through a long life, the truth of an old aphorism, which I used to write, as a copy, when a boy at school—"what is violent is seldom permanent"—and the merino, the morus, and now the Berkshire mania, all are proofs of the truth of the old adage; they have all been too violent to be permanent, and should be held in remembrance, as a warning against future speculations.

Well, then, Berkshires are no longer Berkshires, but *improved* Berkshires! So they can now be black, red, tawny, white, spotted and speckled, and yet be quite pure and perfect blood—in short, IMPROVED BERKSHIRES—leaving the old breed quite out of the question—then I would say, that Benjamin Cooper, of Camden, N. J., has about the best hogs in this country, and they deserve the character which J. G. has given them in page 382, vol. 4, of the Cabinet, the perusal of which account, induced me to go and view them for myself.

It is a pity the game is likely so soon to be brought to a close, for I have half-a-dozen young friends, who were just ready to dash into the speculation, each prepared with his *Bement or Lossing*, and a pedigree as long as my arm, and all of the right colour too, to a hair; but Mr. Samuel D. Martin's letter, in the Franklin Farmer, has, or I am much mistaken, blown up the Berko-mania, and will quite spoil the trade. He admits that the genuine Berkshires were red, with black spots—indeed, that is undeniable—but he contends—which is as *deniable*—that they were a coarse hog, with large ears and curly hair, a great consumer, but that would attain a large size (now, what on earth was there in such a hog desirable to breed from?) and, therefore, he would make it appear, that every good quality of the present improved breed was obtained from the Eastern or Chinese hog, of which there were two varieties of colours, the white and the black. Professor Low, however, contends that the colour of the *modern* Berkshire is still a reddish brown, with dark spots; many of them, he says, are nearly black, manifesting their near approach to the Siamese character, and sometimes they are black, broken with white, but not a word does he say of their being quite white; although he admits that from this intermixture it becomes, in many cases, difficult to recognise, in the present race, the characters of the true Berkshire—and yet Mr. Martin has a white imported boar, of the *improved* Berkshire breed, although he does not claim for him that he is an original Berkshire, but that he is an *improvement* upon that breed, by the eastern crosses. But all this while Messrs. Lossing and Wait attach great importance to their pigs' coming direct from Berkshire, and of being the *only* pure blood, although they have never imported, by any chance, any of the original red and black colour; and they brand all those with contempt that are not black and white, with the given number of white feet and white hairs in the tail.

But Mr. Martin says, although red and black was the original, and has always been the prevailing colour of the real Berkshire hog, yet, *thirty years* ago there were white and black ones amongst them, (he must then mean, I presume, amongst the original breed) and that he considers it, therefore, perfectly idle to say, that in an animal that is white and black, a few hairs of the one or the other colour, in this or that place, constitute a genuine or a counterfeit—and so say I—but this is robbing the milk of all the cream, for, as I have often seen, much more importance has been attached to their colour, than to any other qualification.

So then, it appears that every one has been breeding his own *improved* Berkshires! And that, in short, Berkshires are no longer Berkshires! I shall, therefore, *no longer* expect to see people shelling out their dollars for very inferior pigs, merely because they have been bred by such and such gentlemen, without regard to much, besides the colour of the feet and tail! And it comes at last to this—a good hog, any more than a good cow, cannot be of a bad colour.

Let it not, however, for a moment be supposed that I wish to detract an ioth from the value of the Berkshires—they are most excellent as a cross with our own swine-stock, and have done, and will do, infinite good; but, really, the nonsense which is bandied about in all sorts of ways, and all about things of the most trifling importance, is perfectly surfeiting, and reminds one of the old couplet,

"Strange, that such difference there should be
'Twixt tweedle-dum and tweedle-dee!"

John Dillon.

New Jersey.

The too great encouragement of manufactures insensibly deprives the land of proper culture, and consequently occasions the ruin of agriculture.

To the Editor of the Farmers' Cabinet.

Alderney Cows.

Sir,—I am much pleased with your proposal, to give us, periodically, the portraits of the different breeds of English cattle, from Youatt's standard work, published by Grigg & Elliot, accompanying each with a descriptive notice; for, as our breeds of cattle in this country are very much of the precise varieties of the English herds, it will enable us to judge of our individual animals, and class them accordingly. I sometime since obtained a sight of that interesting publication at the house of a friend, and regretted that the price was such as to put it out of the power of many of my small neighbours as well as myself to obtain it, but judging from the first specimen which you have given us, of the Alderney cow, and learning that one-half the book is occupied with the description and treatment of the diseases of cattle—a work much wanted by us, as a great number must, of necessity, reside far away from advice and assistance in time of need—I shall not rest satisfied until I procure it. In the meanwhile, we shall be furnished, through the pages of the Cabinet, with handsome portraits of every distinct breed, and your intention to fit each with its living prototype, is a happy thought, and I am very curious to know what animal is designed for publication in your next number. The last is, I think, peculiarly well matched, for I remember seeing the cow herself, at the Philadelphia Agricultural Society's Exhibition, fastened to a post at the entrance of the yard, and wondered how it had become the fashion to ridicule the breed, for I thought her very pretty for the dairy, and could easily conceive, that by judicious crossing amongst themselves, they might soon be made more valuable for other purposes. But I found, upon inquiry, that she had been brought there for crossing with the Ayrshire bull, and not for exhibition: now, I cannot see what the advantage of such a cross is expected to be, for—if it be allowed me—I would say, I do not consider the Ayrshire a distinct breed, but a variety that has been formed by crossing with others, and they are precisely what they have thus been made, too small for beef, and not sufficiently deep as milkers to render them very desirable for the dairy; for I fear they carry too much flesh to warrant the expectation of very rich milk—*all cream*, as it is usual to denominate that drawn from the Alderneys. For myself, I should find no difficulty of choice, for if my object were beef, I would select the short-horns at once, while, for butter, I must expect to sacrifice that point, and would, therefore, go the whole hog, and take the Alderneys, wretched as they are in appearance, and despised in character. But my own experience of the breed is by no means so contemptible as their enemies would fain lead us to imagine; I once owned one of these animals, but did not observe that "she ate as much as a large cow, and required extra shelter and keep to render her at all passable as a milker;" on the contrary, she fared as my other cows did, received no extra keep or shelter, ate about two-thirds the quantity of food, and gave almost two-thirds more of butter than most of them. But this was not all, *or near it*, for the extremely rich and yellow milk which she gave, produced such colouring when mixed with that of the other cows, as enabled me to sell my butter for two or three cents a pound more than I should otherwise have obtained for it; and, what was of far more importance, shortened my market hours, so that I usually reached home long before the time I should else have done; and thus was I saved many days of my life in attending market. I kept this little animal for several years, and at last she had the misfortune to slip her hip, when, not being in calf, I determined to feed her, which I did, amidst the jeers of my friends and neighbours for miles around, who were accustomed to ask me, what I would take for my *bag of bones?* But it is a fact, that I never fed an animal that paid me so well for the food which she ate, and so far from the meat being poor and tasteless, I have the testimony of my jeering neighbours, that finer flavoured beef was never tasted; very yellow in the tallow, and much inside fat, with the flesh well mixed, and weighing far beyond the highest figure that was named by any of us. This cow I obtained out of a drove of cattle that came from the west, by way of *make-weight*, for, instead of *splitting the difference* which there was between me and the drover, in the price of fifteen cattle for which I was offering, he threw in the *offal*, as he called her, as a set-off, which, however, proved far more advantageous to me than all that I gained by the whole purchase.

Now, be it remembered, I would by no means recommend these small, and I am willing to call them ugly cattle, as suitable stock for the Kentucky blue-grass pastures; but there are "situations and circumstances," in which, I am quite satisfied, they would be found of far more value than larger and handsomer stock; and, judging by the way in which two of these wretched-looking objects, which were exhibited at the Agricultural Society's meeting, as *Guernsey cows, just off their voyage*, went up to $200 each in price, there were others who thought so too. I should be glad to learn into whose hands these "bags of bones" fell, and if they ever recovered *any* of their flesh—their milk, for

some time to come, must be of no account, of course: would any of your readers, who know about them, be pleased to inform us of their well or ill-fare? But I cannot think that the bulls, which were exhibited with them, were good, even of their kind; valuable, however, to perpetuate the breed, but for no other purpose; to cross these animals with any other stock would be, in my estimation, to render them totally worthless—true, they might possibly be made to carry more flesh, but just in that proportion would their milking property be sacrificed, and they would, at best, be but a valueless substitute, either for the short-horns or the Alderneys.

JOHN OWENSON.

For the Farmers' Cabinet.

Peach Trees.

GENTLEMEN of great experience in the cultivation of the peach assert that the decay of this valuable tree is, in a great measure, and principally owing to the practice of grafting: an imperfect union takes place; sickly growth is the consequence, and the diseased tree is then rendered vulnerable to the attacks of the worm, which completes its destruction.

Now, if we would have healthy peach trees, we must not do violence to nature; we must cultivate from the stone; and although we might find some bad and worthless fruit, we shall have much that is excellent, and obtain new and valuable varieties, by planting the seeds of those only which are very superior. A gentleman has just informed us that he has obtained peaches of most delicious flavour from trees the third year from the planting of the stone, without grafting or budding: and by far the finest peaches exhibited at the late horticultural meeting in Philadelphia, bearing the name of the Tippecanoe Peach, were produced by the above means, the planter, it is said, having reserved the stone of a remarkably fine peach, which he purchased in the Philadelphia market for twelve and a half cents, and the tree from which had never been either grafted or budded. There are still in existence many large and aged peach trees, which have never been removed from the place where the seed was planted, or either grafted or budded, but which continue to produce large crops of the finest fruit. Nothing is easier than to plant a row every year of the seeds of the finest peaches to be obtained for money in the market, and pruning them in their places until they produce fruit, at which time those of inferior sorts could be grafted, and others of fine flavour might be permitted to remain, with the expectation of their retaining health and vigour for many years to come.

B. H.

Dec. 21, 1840.

For the Farmers' Cabinet.

Friesland Sheep.

MR. EDITOR,—In reading the address of Nicholas Biddle, Esq., to the Pennsylvania Agricultural Society, I perceive he omitted to name the Friesland Sheep in his notice of the different breeds, which, however, in my opinion, and all who are acquainted with that stock, are better adapted to the use of farming purposes than any stock of the kind in our country. They were introduced into this country from the Dutch Province of Friesland (which is celebrated for sheep of extraordinary size) many years since, but it has escaped my memory by whom. The stock is unusually hardy, and they grow to a very large size; I have killed them from grass, without any extra food, weighing 110 lbs., and I have known 13 lbs. 8 oz. of washed wool cut from a single sheep. The mutton is particularly fine, the wool is coarse and long, without being hairy, and is admirably calculated for all the purposes of the farmer. They have speckled or black faces and legs, with large ears, resembling those of the deer.

The full-blooded animals, I apprehend, are scarce, and but few have them. I can, however, trace my stock to the gentleman who obtained them from the second owner in this country. I shall dispose of some lambs the next season; but should any of your readers have a wish to obtain the stock, they must be engaged early: I would deliver them on the cars of the Baltimore and Ohio Railroad, in the month of August next.

Any reference that may be required can be given. BENEDICT BOONE.

Frederick County, Md., Dec. 5, 1840.

For the Farmers' Cabinet.

Emur, a Species of Barley.

MR. EDITOR,—A friend has put into my hands a small parcel of a singular species of grain, much resembling wheat, which will, I expect, prove a very valuable crop for this country, where the climate is sufficiently warm to bring it to perfect maturity in three months from the time of sowing. All that is here known about it is this—some time since, a German brought a very small quantity of the seed to this country and planted it, reserving the produce; to him it was known by the name of *Emur*. Mr. James Gowen, of Mount Airy, Germantown, purchased some of this seed in the spring, which he sowed on the 6th of April, in a situation by no means favourable to its growth or yield, yet on the 16th of July he harvested a *very large crop*, weighing 60 lbs. per bushel. The seed which he obtained was not clean, it had many oats intermingled with it; these grew

up and were harvested at the same time: some of these accompany the present sample, and go to show the superiority of the emur as a crop, cultivated under precisely the same circumstances. The growth of the straw is similar to that of barley, with the same-formed ear externally, the awn or beard of the barley very perfect, but it is not attached to the grain, *that* being formed like wheat, of course without husk, and this is the cause of its great weight. Mr. Gowen remarked that the straw was very highly relished by cattle, although it had suffered from rust, as all the crops in the neighbourhood had done the present season.

I enclose a few grains of this *barley-wheat* for your inspection; and should any of your readers be acquainted with its history, and will communicate what they know about it through the pages of the Cabinet, they will render a service to the agricultural community. After all, it might be a crop already well known to many, and if so, it will go to prove the importance of agricultural journals, which are the means of intercommunication not otherwise to be obtained; and I hope the time is coming when they will be regarded as an invaluable source of information, amusement and instruction to the farming interest of the country generally: and let me observe, if the pages of these journals were more frequently occupied by that class of persons, we should not so often hear the complaint that much of the matter there contained, consists of theoretical notions — the fact is, farmers ought to make the pages of the agricultural press *their own*, and, by the use of their pens, supply them with matter that would be suited to their own peculiar wants—a register of events, and a book of inquiry. C. W.

Schuylkill County, Nov. 23, 1840.

We find that several parcels of this naked barley, or emur, have been sown in Montgomery County the present season. Would those who have made trial of it report *progress* through the pages of the Cabinet, and send samples to the office of the Farmers' Cabinet, for the inspection of those agricultural friends who oblige us by their frequent visits while in town! — Ed.

For the Farmers' Cabinet.

Protection of Plants in Winter.

The *Maine Cultivator* states, that the best article with which to cover grape-vines and other tender plants, as a protection during winter, is hemlock boughs — they turn the water, being more compact.

Straw, on the contrary, which is commonly used, collects and retains the wet, and sometimes does more hurt than good. It is not so much the cold of our winters that destroys tender roots, as the wet that is suffered to freeze into ice about them.

Timothy Matlac, when residing at Lancaster, was famous for preserving his vines by trimming them and burying them lightly under the earth, and raising them early in the spring.

Mr. Priestley preserved his grain from the effects of frost, when it was unprotected by snow, by throwing a light covering of buckwheat straw over it, by which his crop was saved, when his neighbours' was generally destroyed. The straw protected it from the cold winds although it was but very slightly covered, the grain appearing through the straw. J. V.

For the Farmers' Cabinet.

Rocks.

CLEAR AWAY EVERY OBSTRUCTION TO AGRICULTURE.

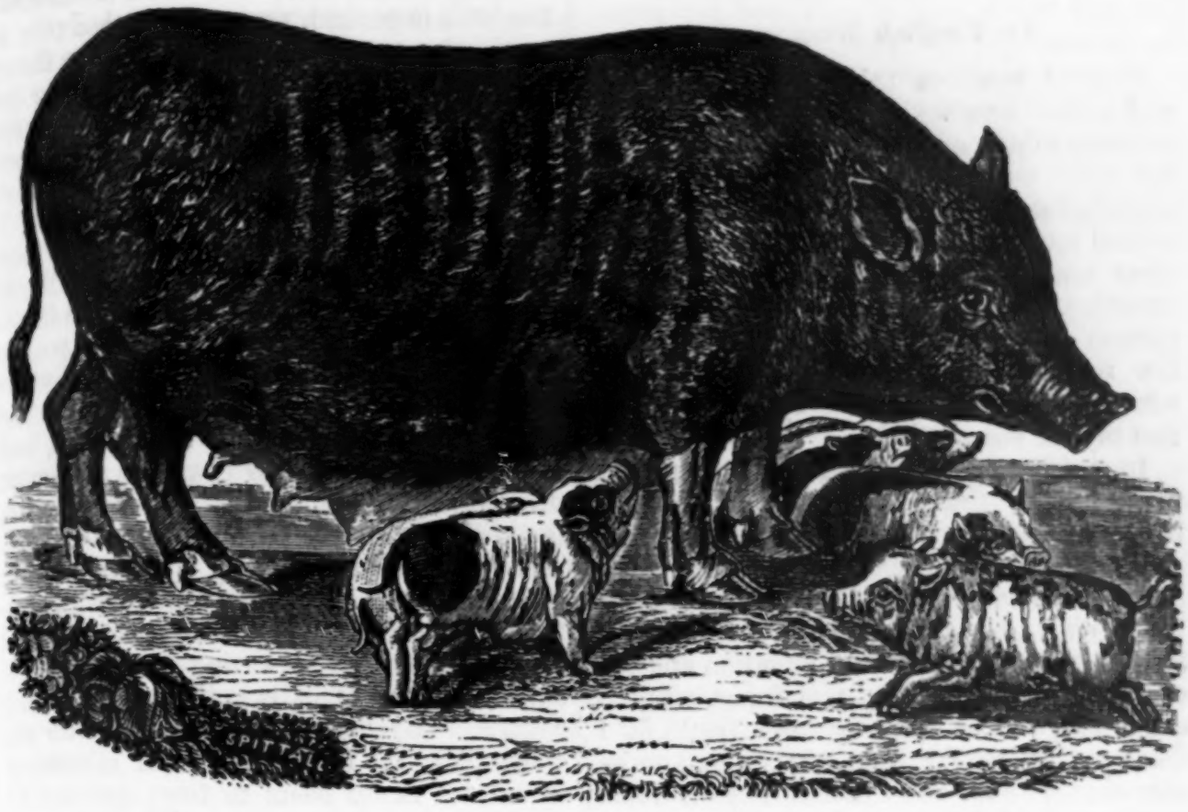
Mr. Editor,—There are some farms that have large stones and rocks dispersed here and there over them, where they have remained undisturbed from creation to the day of this writing, the owners ploughing around or over them, injuring their ploughs and horses, and making bad work in the vicinity of these permanent nuisances. The ground occupied in this way is the best in the field, for it has never been exhausted by injudicious management, and on some farms the quantity is not inconsiderable.

Now, I would advise those who are annoyed by such obstructions to go to work, be up and doing, and rid themselves of these ancient intruders without delay. Some apply the process of blowing to reduce rocks to a size so as to be easily handled, but a much more simple plan may be adopted, particularly with very hard rocks, such as are difficult to bore, by building a fire with some dry wood upon them, and, when they are well heated, throw water upon them, which will be as certain to break them as powder.

In this way the largest and hardest rock may be reduced to small fragments in a very short time, by the labour of a small boy. Having recently seen this kind of operation, and being surprised at the great effects produced by the smallest possible amount of labour, I forward this for the Cabinet, in the hope that it may suit the taste of those who are afraid of bone-labour, and enable such to clear their fields of impediments to culture with the smallest possible amount of muscular exertion. Lapis.

Radnor, Dec. 15, 1840.

A state of ease is at best but a neutral state of being, alike distant from positive happiness as from positive misery.



SIAMESE SOW,

Three years old. Imported from Singapore by Messrs. Dugdale of Manchester. The pigs by a half-bred Chinese Male.

This race, supposed to be the most typical of the domestic hogs of those countries, has been termed the Siamese breed, from the kingdom of Siam; but the terms Birman, Cambodian and Malaccan would be equally applicable; therefore, by the designation *Siamese*, must be understood, not a race proper to Siam only, but to a vast extent of country situated in this part of Asia.

They are of small size, and have a cylindrical body, with the back somewhat hollow, and the belly trailing near the ground, in consequence of the shortness of the limbs; the bristles are soft; the colour usually black, and externally of a rich copper-colour: the ears short, small and somewhat erect; less hardy and prolific than the native races of Europe, but arriving very soon at maturity; fattening on a small quantity of food, their flesh white and delicate. The *varieties* of this race, brought from China as sea-stock or otherwise by vessels, have usually the dark colour characteristic of the race, but are often also white, and of a size exceeding the medium—for there are in China, as in other countries, varieties of breeds. Some of these, kept in the temples, attain, in consequence of age and long fattening, to enormous magnitude, but it does not appear that these *sacred pigs* are any otherwise distinguished from the common breeds. The hog is almost the only large animal which is reared by the Chinese for human subsistence; they use also the milk of the sow as an article of food. The most minute care is paid to the rearing and feeding, extreme attention being paid to cleanliness and regular feeding, far beyond what is practised in Europe! The hogs of China, which have been introduced into England, are delicate and sensible of cold, and are rarely maintained, therefore, in a state of purity; it is chiefly by intermixture with the English races that their value is recognised, or their introduction attended with beneficial results—by them the coarseness of form, and the inaptitude to fatten, of the old English breeds have been corrected, probably, however, at the expense of the size of the native races, and their power to produce numerous young.—*Professor Low.*

It is a question of importance, how far it is expedient to continue the introduction of this race; many persons believe that the admixture has already been carried far enough, while others conceive that the thing has already been overdone. The flesh of the Eastern hog is tender and good, but better suited for pork for the table than bacon.

To the Editor of the Farmers' Cabinet.

An English Emigrant.

Sir,—I came to this country, two years and a half ago, with very strong prejudices, as many others of my countrymen have done, but mine were all in favour of the land of my adoption—my English predilections I left behind me—and as my history may be somewhat amusing to your readers, if not instructive, perhaps you will favour me with a portion of your pages, in which to indulge a few recollections of the past, and to record some of the circumstances by which I now find myself surrounded.

In the first place, then, I was a farmer for many years in the old country, but could not bear up against misfortune, because my land was too cheap! so you see I did not come here for cheap land. Many of my neighbours, with land at three times the rent and six times the advantages of situation and circumstances, did well by remaining, while I could only *do* by quitting: the truth is, I found myself too far from market, and on an unproductive soil, and I therefore determined to *cut*—but I did not *run*, for, on leaving my country, not an individual was the loser of a cent by my emigration, and that's a fact. On coming to this determination, I began to cast about to see what I could take with me, to a land which I supposed, as most of my countrymen do, would afford but few of the conveniences of life, to say nothing of comforts and luxuries; and I regretted that I could not bring away my household furniture, tables, chairs, &c., as these things must, I thought, be scarce, and of course very dear; but that I found to be impracticable, so I left all, except my double-barrelled gun and two powder-flasks and shot-belts, well filled, as I had no doubt these would be in pretty constant requisition, in a country where game was so plentiful, and no game laws; and yet, I must say, I had often observed, that although every one, on emigration, is particularly mindful to take his *double-barrel*, yet I never heard of their prowess in the use of it in any of their letters home—this I could not account for then, but I can now.

Well then, I landed at New York, with the vow that nothing should interfere with my determination to follow my own profession—the culture of the soil—and many a beautiful castle did I build in the air, to my heart's content—a hundred acres of good land of my own, in a lovely spot, surrounded with every comfort, happy as a lord, and with my double-barrel, my constant companion, always in requisition; but, alas, how strangely metamorphosed are all my views! I find myself at the present settled down in a small store, within a few miles of the Schuylkill, with my double-barrel and stock of ammunition still unpacked, never having had time or inclination to use, or even to look at them; with a spot of ground sufficient only for the spade, and my mind in a considerable degree alienated from an employment, which I once considered interwoven with my very existence!

But, amidst all this disappointment, I have a great share of real enjoyment too; for, in the first place, the country itself, with its political, moral and intellectual advantages, far exceeds my most sanguine expectations, while its natural beauty and unbounded extent and capacity, transcend all my calculations, and render quite impossible even the attempt at description or delineation. My situation, too, is not by any means so unfriendly to my former views, for, in the way of business, I am often visited by the farmers in the neighbourhood, and many are the long yarns that we spin together, while sitting on a mackerel barrel or a keg of nails in the store, all about cows and hogs, ploughs and carts, butter and cheese, and the fine weather and climate, of which we never seem to tire; and one advantage which I enjoy is, as I have now nothing of the working part to do myself, I can see so much clearer how others *ought* to manage their affairs—a very pleasant employment, we all know—fulfilling, too, the apostolic injunction, "Let every one look on the things of his neighbour." I would observe, however, these conversations never degenerate into controversies; we give ourselves the license to think what we will, and say what we think, and as our talk is generally about fat oxen, good sheep, beautiful horses, and fine butter, we find much more pleasure in agreeing than in differing; at the same time, my friends give me permission to speak my mind, and have sometimes shown themselves not averse to turn my theory into practice, expressing satisfaction when a suggestion has proved itself worthy of adoption; while I, in my turn, have been benefited in a tenfold degree by such an unreserved interchange of ideas and opinions, and can see very clearly, that to be able to turn *short corners*, a man must come to America.

One of these friends has lately brought with him to the store "*The Farmers' Cabinet*," and has read to us the different articles contained in its pages; I assure you a degree of interest is springing up around us in consequence, that augurs well for the science of agriculture, as also for the spread of a work, which seems peculiarly adapted to the wants and wishes of that class of individuals in this part of the country; and I have proposed, that we form a little society amongst ourselves, to meet at my store on the alternate Tuesday evenings, for the purpose of reading

its pages and conversing about their contents: I tell you, great interest is felt on the subject, and I calculate that our *Secretary* will soon be instructed to communicate to the Editor of the Cabinet, portions of our *transactions* from time to time, as it may fall out.

By the bye, Mr. Editor, do you not think that this plan of meeting at the store, for the purpose of conversation and comparing accounts, might prove of much importance to the farming interests of a neighbourhood in general, as well as not a little to the business of the store in particular? I think it might, especially in many places remote from towns and villages, where the associating together of friends and neighbours to talk over matters, would form a very rational and pleasing mode of passing an hour, to their mutual edification and improvement. I confess that I am pleased with the idea, putting the store for the present out of the question, and have, therefore, commenced clearing out an adjoining closet, which may serve as a cabinet, for the reception of specimens of fine crops, and curiosities both natural and artificial—a sort of museum, which might prove of much service in our future progress, and add not a little to the interest of the undertaking. I have already many specimens with which to commence furnishing it, particularly twelve distinct varieties of fine wheat, some of each in the ear; as many of corn, some of the ears sixteen inches in length; several varieties of the oat and barley, and a sample of the singular grain, between wheat and barley, called *emur*, of which we are proud; with sugar-beets and rutabaga of gigantic size: the skeleton of a rat, starved to death in a cupboard, the bones polished like ivory by the ants and roaches—a most perfect specimen, and exquisitely preserved; a chick with three legs, and a young rattlesnake, preserved in spirits; the broken horn of John Judkins's bull, which was found embedded in the chest of Elias Spragg's horse, causing the destruction of the poor creature, and from whence it was taken after his death: the skeleton of a fish, with the bill of the hawk; a model of a Scotch cart, made by the son of one of our farmers, a capital specimen of workmanship; a miniature set of harrows, and a Welsh butter-plump; with curious stones, metals and minerals, already quite a large collection. So that you see I have something much better than my double-barrelled gun with which to employ me, and can now understand how it is that those, whose first thought on emigration is their sport, contrive to make their regular engagements serve all purposes.

With the love of agriculture, however, still "strong as death," I offer my services for its support, and can think of no way more likely to forward its interests, than to subscribe for the Cabinet, and *chronicle* for its pages, and from time to time, "The proceedings of the Agricultural Society, meeting at the store of" Your humble servant,

JOSHUA SHARROLD.

P. S. The first article of our Rules is to run thus—

1st. No member of the Society to incur one cent expense on its account.

To the Editor of the Farmers' Cabinet.

Manure,

HOW TO APPLY.

SIR,—Allow me, through the medium of your valuable paper, to make some inquiry in relation to a subject intimately connected with the farmer's interest, and touching the very ground-work of his operations, and, as it seems to me, particularly in the county of Chester, where it is my *good fortune* to reside.

It is universally admitted that manure is the capital on which the farmers do business, and he who teaches them how to obtain it at a reasonable rate, and in sufficient quantity, does the public more service than if he lectured his life-time on copper and silver mines, and amused his sleeping hours with golden dreams. Thorough manuring is the foundation of all good husbandry; and when combined with deep ploughing, insures a general and uniform fertility; assisted, no doubt, by the essentials, thorough working, and a judicious course of cropping.

But the question naturally arises, at what season of the year should manure be applied, so as to exert its power most effectually to the farmer's interest? And in what manner, so that its effects may be the most perceptible? Should it be thrown upon the surface of the ground, there to lie some weeks previous to its being turned down by the plough, and thus be exposed to the scorching rays of an August sun, to evaporate its *pernicious properties?* or should it be ploughed under immediately, in order that nothing may escape? My sole object in these inquiries is, to elicit information upon these important points, which invite the study and attention of practical agriculturists, and to settle those conflicting notions and discordant *facts* that have been handed down to us by the pages of history, and still continue to be agitated, even at the present day; so that they form a heterogeneous mass, sufficient to confound the mind of the plain, practical husbandman. A reply would oblige

A SUBSCRIBER.

IT has been wisely ordered by a beneficent Providence, that the necessities of man properly administered should become sources of enjoyment.

To the Editor of the Farmers' Cabinet.

Mount Airy Farm.

My Dear Sir,—In compliance with your request, I herewith present you with an account of crops gathered from my Homestead Farm in the harvest and fall of 1840.

There is nothing remarkable in the yield, save that in the aggregate, it is abundant, considering the quantity of land under tillage, its soil, and in many places, its untoward condition for cropping. Nor is there anything new in the practice; the chief merit, from the time of preparing the seed, until gleaning, being the economy, neatness, and efficiency so perceptible in every stage of the culture, of which I must be permitted to feel proud:—and to you, Messrs. Isaac W. and George W. Roberts, Robert T. Potts, &c., of "The Philadelphia Society for Promoting Agriculture," who have had frequent opportunities of viewing the condition of the fields and patches referred to, I submit whether I am entitled to the distinction I seem to claim for the style and manner in which the operations were conducted.

With the close of the present year, I shall have finished my apprenticeship to farming, say five years, which, when it began, found me as great a novice as ever entered a field; and now, with the characteristic vanity of the "young and free," I think, from dungheap to granary, I may not doff my cap to any man of clay in the country. It is not mere *vanity*, however, that makes me say this; it is the desire to benefit the calling, and to encourage others to persevere. I found, it is true, many repulsive and discouraging circumstances in my progress to the point at which I have arrived; but having put my hand to the plough, I could not, I *would not* look back. Had I consulted present interest and convenience, however, I should never have arrived at the *headland*, but left plough and team to finish the furrow in their own way, and as they best could.

It may be inferred then from my position, that I have made no money by cultivating the soil for the last five years: neither have I. Bos, the Farm, got all, and reaping all the profit, it was but fair he should defend me, as he did, against all loss,—and now that I am "free," he shall, I promise you, give me in future good wages for every job I undertake for him. In fine, I am satisfied, from the present condition of things on the farm, that, with the blessing of Providence, and should my life be spared for the next 5 years, I shall derive as much income from the capital employed in farming, as will make as good a percentage for the whole 10 years, as any permanent fund for the same period can afford. But, should I be disappointed in this—of which I have not a fear—I shall have the satisfaction to think that I have added my mite to the country's wealth, by the increase of her products; and that, instead of being merely a *consumer*, I have been a *producer*; thereby furnishing to others the staff of life; and in having devoted so much of my time to the improvement of those essentials on which much of the health and comfort of my fellow-citizens depend.

I am, very respectfully,
Your friend,
James Gowen.

23d December, 1840.

Statement of Winter and Spring Crops, raised by James Gowen, on his Homestead Farm, Mount Airy, in 1840.

WINTER CROPS.

Sowed on the 14th Sept., 1839, 4½ acres rye and timothy on potatoe land. In early spring it looked promising, and on the 15th May it was in bloom; but exhibited an appearance of rust, which was mentioned to many farmers, who, on examination, found their rye in worse condition than it; their hopes of anything like a crop being entirely destroyed. Produce, 12 bushels to the acre—say 54 bushels.

October 1st, sowed 5 acres red chaff wheat, with timothy, on oat stubble, well manured from stable yard.

October 8th, 8 acres with wheat and timothy on corn land, manured in like manner: both these patches, with the rye, had been well limed the previous year.

In early March I put the wheat under a heavy roller; and, with the exception of a wet, clayey part of the field, that but a short time previous was totally unproductive, the whole was thoroughly rolled. This operation, at such a time—the stocking seeming so perfect, and the plants so vigorous—was derided by many who witnessed it. Some said, "I had done for it—and the cows would harvest the crop." Others would ask "whether I was going to plough it up," and thought "I was acting wisely by rolling it, to make a clean furrow." But I had long been accustomed to such taunts, and had learned to treat them lightly. I confess, however, in about a month after, and when I saw my wheat make so little progress, I began to fear that the jokes cracked upon the Roller were not so ill-timed as I had thought them to be, for every one's wheat around me seemed more forward than mine. In the beginning of June, however, it made a start, and when in ear, it put everything around it in the shade;—all other wheat in the neighbourhood being injured by the fly, or lodged and rotting on the ground, while mine stood erect, clean, and

healthy, with the exception of the wet clayey spot, which had not been rolled. It yielded 15 bushels to the acre, the quality *very* superior.

But the rye and wheat which I reaped, are but a part of the result, for finer set timothy, on the whole field of 13 acres, has seldom been seen.

SPRING CROPS.

Sowed spring wheat with orchard grass, about 4½ acres, on the 6th April. Reaped 22d July. Soil variable, from stiff clay to isinglass, sandy; a considerable portion of the field underdrained, which but a short time back was a sour rushy marsh. A finer patch of wheat, in stalk and head, no one could desire; but the sudden *dry and wet, heat and cold* of the 5th to 8th July, blighted the hopes of an abundant crop—the yield was better, however, than most of the winter wheat in the neighbourhood; with the young orchard grass as finely set and promising as could be desired. The crop, 40 bushels, some of it light and shrivelled.

Spring barley, about 6 acres, sowed on the 16th April, principally on a light sandy soil, mixed with mica. There are two hills which rise in the field, their sides so bare that even the weeds could not live in the burning sun, on the sparkling isinglass rocks and flint stones, which were left by the washing of thaws and rains. The quantity of stone taken from these parts in two ploughings, is immense. It was treated with about 40 bushels of lime to the acre, and the poorest parts strongly manured. The crop was reaped 20th July, and produced 100 bushels good Pennsylvania barley. It is now in with timothy, which looked as green at a distance, before the snow, as an old pasture field. It will wash no more, nor do I think that in the deepest ploughings that may hereafter be given, a bushel of small or large stone will be found in the whole field.

Planted 3½ acres potatoes, 23d and 27th April; yield, 300 bushels good, and about 50 bushels refuse, or small ones. Ground well limed, now in with rye and timothy.

On the 7th May finished planting 5 acres corn, in hills from 4½ to 5 feet apart—large ear, yellow flint, same as that for which I received the premium in 1838. I call it "Premium Corn." Soil, sandy, light, with isinglass. In 1835, when I manured and broke it up for potatoes, a more hopeless piece of ground, in weed, soil, and condition, could hardly be met with in an old farm. Potatoes were followed by wheat and timothy; but the crops of grass after, were very indifferent—it had only been stirred and strengthened, but not *subdued*. The land has had no manure since 1835, except on a vein or ridge of gravel that runs across the field, where clay, dug from a ditch in an adjoining field, was scattered, and cross-ploughed and harrowed in, which made the gravelly part as good as the best of the field. If hills 4½ to 5 feet apart, containing almost uniformly, 4 noble stalks, with monstrous large ears, make a great crop, then this was one; and cannot be estimated at less than 75 bushels to the acre—owing principally to good seed, judicious planting, and suitable working. The cleaning was done with the cultivator. *Ploughing corn* in a light, dry soil, is death and destruction to the roots of the plants,—such practice can never be justified, but in wet, cold soils, where ridging is necessary, for warmth and draining.

May 4th, planted 1¼ acres of yellow-gored corn in drills, 4½ feet apart, the grains 8 to 10 inches apart, worked altogether with the cultivator. Produce, about 60 bushels to the acre—whole yield, 75 bushels. This crop was planted in a patch from which roots had been taken the previous season; the planting was badly done in my absence, and the storm of the night of the 23d July, prostrated it; otherwise 100 bushels to the acre might have been gathered. The mode of planting by drill, will, I trust, ere long become general. The hill practice can only be justified where the object is more to improve the land by cross-ploughings, than to produce a good crop of corn.

ROOTS.

						Ton	Cwt.	qr.	lb.
April 24th, sowed	3-8 of an acre of carrots in drills 2 feet apart, gathered from 17th to 25th Nov.	270 bushels,	rate 720	bushels to the acre	The two patches, 720 bushels, at 50lbs to the bushel, - - - - - -	16	1	1	20
May 2d,	7-8 of an acre ditto,	450 ditto,	rate 516	ditto.					
April 24th, sowed	1-4 do. sugar parsnep	215 ditto,	rate 860	ditto,	The patch, 215 bushels, at 50lbs, - -	4	15	3	26
May 8th, do.	1 do. mangel-wurzel	850 ditto,	rate 850	ditto,	Gathered Oct. 30th and 31st, at 64lbs, -	24	5	2	24
May 14 & 16, do.	1 3-16 sugar beet	918 ditto,	rate 773	ditto,	do. Nov. 3d to 5th, at 64lbs, -	26	4	2	8
In all,	3 11-16 of an acre,	2703 bushels.			Beets and mangel-wurzel at 64lbs, Carrots and Parsneps at 50lbs, give	71	7	2	22

The beets, carrots, and parsneps were raised on what had been a timothy sod of 6 years' standing, ploughed up last fall—a more troublesome patch for grass, weeds, and small stones, has rarely been appropriated to such culture; yet all was overcome; so that when the parsneps were gathered, on the 30th November last, the ground in appearance resembled more a lately-ploughed field, than one from which a crop of roots had just been taken.

The manure used, was part stable and part street dirt, and did not exceed in quantity what would have been requisite for a crop of potatoes, but then it *all told*. The weeds had little or none of it. The labour bestow-

ed on the ⅜ carrot and ¼ sugar parsnep was, in all, equal to one man 22 days; the ⅛ patch of carrot, 25 days. The sugar beet and mangel-wurzel did not get, by one-half, as much work in proportion, nor was it as timely given, except in sowing and thinning—they were attended to only at intervals, when the mornings were damp or doubtful, or at other short periods, when the work in the harvest field could not be prosecuted.

Mr. Gowen ascribes much of his success in raising so fine a crop of roots, to his gardener, Peter Keiffer, whose skill and industry were favourably noticed last year, in the proceedings relating to crops, by the "Philadelphia Society for promoting Agriculture," and published in the Cabinet.

RECAPITULATION.

4½	acres,	54	bushels	rye, at 50 cts.....	$ 27 00
13	"	195	do.	wheat, at $1 05.....	204 75
4½	"	40	do.	spring wheat, at 80 cts....	32 00
6	"	100	do.	spring barley, at 50 cts....	50 00
3⅛	"	300	do.	potatoes, at 50 cts	150 00
5	"	375	do.	corn, at 50 cts	187 50
1½	"	75	do.	do. 50 cts	37 50
37⅞	acres.				$ 688 75

1 3-16	sugar beet,	918	bush. at	20,	$ 183 60
1	mangel-wurzel	850	"	15,	127 50
1½	carrots,	720	"	50,	360 00
¼	sugar parsnep,	215	"	50,	107 50
3 11-16	acres.				778 60
					$ 1467 35

For the Farmers' Cabinet.

New Year's Day.

Mr. Editor,—A kind Providence has brought us to the opening of a new year,—may it accompany us to its close!

This is the season for the farmer to turn over a new leaf and a clean page; and, to be myself consistent, I purchased at the time I last called on you at your office, while passing through Messrs. Kimber & Co.'s bookstore, a particularly neat little publication, consisting of an almanac and diary, for 37½ cents, which I have this morning opened, by placing at the head of the first page the following memento. "Whatsoever thy hand findeth to do, do it with all thy might—THERE IS NO WORK IN THE GRAVE." I have therefore begun the year in good promise,—may I live to close it in good faith!

No one knows the value of a diary but he who has tested its utility; and to the farmer above all others, is it indispensable to a correct formation of judgment, which is made up of past observation and reflection; and it is with him a text-book, from whence many an excellent sermon is preached for condemnation as well as instruction, for reproof as well as comfort: and I see this exemplified most particularly, whenever I call upon my friend Jacob Evans, to enjoy an hour's conversation of an evening; for in a few minutes down comes his diary, and from it we gather, as from chapter and verse, the *why* and the *wherefore* of many a good and ill that has befallen us, during the past and present years, and from whence we had learnt the cause of the general blightiness of the past season, long before the publication of that extremely interesting paper, at page 159 of the last No. of the Cabinet—for to the unseasonable heat of the early spring, and the frosts and hailstorms which fell out so late in the season, had we already attributed the blight, of every shape and colour—on the grain as well as on the fruit trees of every kind—particularly on a row of pear trees, which surround the back of his house.

Let every one, therefore, provide himself with an almanac and diary; make a snug niche for it on the corner of the mantel-piece on his side of the fire, and close to the ink-bottle, and never retire to rest of an evening until he has entered on its pages something relating to the past day—the state of the weather being of paramount importance.

I conclude in the words of Frank's Father, in the Dialogues—"This is the first morning of a new year; we have risen in health and safety, with a prospect of happiness; and although the times are difficult, still we trust that our daily labour will procure us daily food—and a farmer, in the bosom of a happy family, should be the last man to despair. We now look forward to the spring, too, and then we shall have two summers to one winter, you know. This is the season of all others the most suitable at which to form good resolutions; we have enjoyed the festivities of Christmas, and now for the thankfulness of a grateful heart."

Your constant reader,

W. G.

N. Jersey, 1st Jan., 1841.

To the Editor of the Farmers' Cabinet.

Hampshire Hogs.

Sir,—The portrait of the Hampshire sow, in the No. of the Cabinet for November, and your expressed opinion, that Mr. James Gowen, of Mount Airy, Germantown, was possessed of a remarkably fine animal of that breed, induced me to devote a day to the purpose of seeing her, and I can bear my testimony to the fact of her being a superb animal—such an one as I had not before seen—with length and depth enormous, and, withal, a skin as sleek as a Chinese. But, how shall I say it! I found her devoted to the butcher—her owner having despaired of obtaining pigs from her, after keeping her a year in that hope: this circumstance I consider a loss to the country as well as to him-

self. I should be glad to see recorded in the Cabinet, the weight of this splendid animal when killed, as also her length and depth of carcase; and hope that Mr. Gowen will be so obliging as to furnish these particulars for reference.*

But my chief object in addressing you at this time is, to request of your readers to inform me, if they know where I can get supplied with this breed of hogs. I do not like the fashionable breed of what are called Berkshires, and have an objection to their colour. I had always a prejudice for a white hog, and since I have seen Mr. Gowen's sow, my preference has been greatly strengthened: I would go some distance, and give a good price for a pair of young pigs of her form and appearance. It is possible, that amongst your numerous subscribers, there might be some who can give me the information, and if they will do so, I should be happy to reciprocate the obligation.

JOHN TEANEL.

2d Dec., 1840.

[We feel pleasure in informing our correspondent, from all that we have been able to learn, the breed—or at least a remarkably fine breed of large white hogs, answering in very many essential particulars to the Hampshires—might be obtained of J. S. Skinner, Esq., proprietor of the "Baltimore American Farmer;" a gentleman whose praise—as a first-rate judge of stock of all kinds, and one who intends devoting his talents to the purchase and sale of choice stock of every description—is in all the country; and it would give us sincere pleasure to be made the medium of communication between him—to whom the community are indebted for the establishment of the first agricultural journal in the Union—and those requiring his services, for the purchase and sale of "fine stock of every description."—ED. FAR. CAB.]

Agricultural Papers.

"FOR interest and utility, agricultural journals excel all others with the farmer, the gardener, and even the mechanic—indeed, with every one who loves improvement of any kind: they constitute the medium of intercourse and a rich source of amity between men of distant climes: by them, all improvements in the science are made known, and those who are acting upon old and unproductive systems, are enabled to improve upon the plans and practices of their forefathers, and thereby derive greater profit with less labour. The mode of improving soils on scientific principles, is discussed and taught; the proper crops for different qualities of land, and the correct time of sowing and planting, are learned from these papers; and the man who wishes to learn the best rotation of crops, which are the best grasses, and the best varieties of farm stock, has but to take a good agricultural work, and study it, and he is sure to profit thereby. It might not be, that any editor knows *everything*—all, therefore, ought to feel an obligation to communicate discoveries and practices not generally known; no one should either refuse to write or to subscribe for, at least one paper, and more, if his circumstances will permit; the price is a most insignificant sum for any one, and a man who has but a small garden, much more a farm, can pay for one without missing the sum. There is no duty greater in this age, than to use every laudable exertion to promote the cause of agriculture: this is most successfully done by diffusing information, and this *cannot* be done but by the dissemination of agricultural journals. Let every farmer feel that, as a patriot, he must exert himself, and then, not only will all our papers be extensively circulated, but also the country will be filled with light and information, and "the desert will rejoice and blossom as the rose."—*Agriculturist.*

* This fine animal has been slaughtered, and we regret to learn, no note of her length and depth has been recorded.

Woman's Love.

WHEN man is waxing frail,
And his hands are thin and weak,
And his lips are parched and pale,
And wan and white his cheek;
Oh then doth woman prove
Her constancy and love.

She sitteth by his chair,
And holds his feeble hand,
She watcheth over him,
His wants to understand;
His yet unspoken will,
She hastens to fulfil.

She leads him, when the moon
Is bright o'er dale and hill,
And all things, save the hum
Of the evening bees are still,
Into the garden bowers,
To sit 'midst herbs and flowers.

And when he goes not there
To feast on heath and bloom,
She brings the posy rare
Into his darken'd room,
And under his uneasy head
The pillows smooth doth spread.

Until the hour of death
His lamp of life doth dim,
She never wearieth—
She never leaveth him;
Still near him night and day,
She meets his eye alway.

To my Mother in Heaven.

THOU angel-spirit, who so oft didst sing
My infant cares to sleep upon thy breast,
Let me but hear the rustling of thy wing,
Around thy child its guardian influence fling!—
Oh, come thou from the islands of the blest,
And bear my wearied soul up to thy sainted rest!

For the Farmers' Cabinet.

Botanical Names.

Botanists throughout the world know plants by the same name; whereas, farmers and others in different countries, and in different sections of the same country, have various names for the same plant, which leads to difficulties sometimes of an unpleasant character.

In reading books or essays on agriculture or horticulture, I have often met with the scientific names of grasses or other plants, when the means of explaining them were not at hand, and the information expected to have been obtained was lost. If it will not be incompatible with the designs of the Farmers' Cabinet—which I esteem one of the cheapest and most valuable periodicals published in this country—I will furnish a small table of a few of the common grasses, &c., with their botanical names, in the hope that it may be useful to some of your readers.

GRASSES.

Scientific Names.	*Common Names.*
Trifolium Pratense	Common Red Clover.
Trifolium repens	White clover.
Phleum Pratense	Timothy, (this, in the eastern states, is known by the name of Herd grass.)
Agrostis vulgaris	Herd grass, or Red top.
Dactylis glomerata	Orchard grass, or Cock's-foot grass.
Poa compressa	Blue grass, or Wire grass.
Poa Pratensis	Green grass, Meadow grass; or Spear grass, (this is called, in Kentucky, Blue grass.)
Digitaria sanguinalis	Crab grass, or Finger grass.
Lolium perenne	Ray grass, or Darnel.
Anthaxanthum odoratum	Sweet-scented Vernal grass, (it is this which gives to new-mown hay its fragrant odour.)
Andropogon nutans	Indiangrass, or Wood grass.
Medicago sativa	Lucerne, or Spanish Trefoil.
Hedysarum onobrychis	Sainfoin, or Cock's-head.

GRAINS.

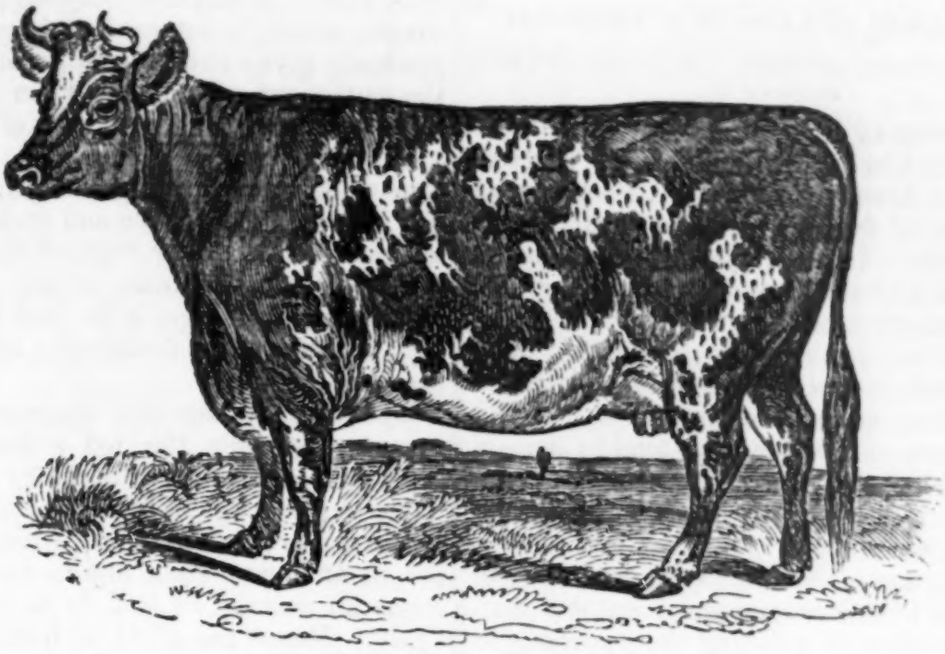
Scientific Names.	*Common Names.*
Triticum	Wheat.
Secale	Rye.
Avena	Oats.
Hordeum	Barley.
Polygonum Fagopyrum	Buckwheat.
Zea mays	Indian Corn.

A.

Neglect of Agricultural Pursuits.

Can any farmer designate to us a single branch of the mechanical arts which manifests so little improvement as in too many branches of agriculture? We do not deny that very great advances have been made, and wonders have been achieved in some departments, but we are not—as we should be—in the front rank in the march of improvement; and one very obvious reason for this is, the notorious disinclination of farmers to avail themselves of the aid of the great lever of modern science—*the Press.* The very fact, of one item of knowledge having reached the press whence in one day it may be more widely disseminated than it could be orally in a year, is, prima facia, the reason why it should not be rejected as "Theory," and "Book Farming;" for let those imagine, if they can, what would have been the present condition of the world, had the spread of all human knowledge been restricted to oral communication! the extent of this bigoted prejudice is scarcely credible; and admitting that the complaints against "Theory" are just, why are those who make them, so loth to give us their "Practice?" Now, in any neighbourhood, five out of ten farmers do not cultivate corn in the same manner, and the quantity produced, varies as much as the manner. Then why not use the readiest means of comparing their different modes, and ascertain the best? there is no necessity that an experiment should be confined to one acre; let, then, every observant farmer carefully note the process of cultivating his annual crop and the attending circumstances, and report them to the public—he will thus furnish all the data necessary to satisfactory comparisons; and, if it *must* be so, let us know the reason *why* we must content ourselves with from ten to twelve bushels of corn at harvest, when over thirty have been obtained. What would each man know of England and France, did he trust to his individual observation? Ninety-nine hundredths of our knowledge is only the testimony of our fellow-men.—*Kentucky Farmer.*

By a report from a select committee of the British House of Commons, it appears that 1150 different articles are subject to import duty, besides some that are not communicated—the total amount of revenue from these is £22,962,610! The duty on tobacco amounted, in 1839, to nearly seventeen millions of dollars, being in the proportion of 36*d.* on 6*d.* worth of tobacco!



ELLEN McGREGOR.

The property of John Struthers, Esq., and imported by him in the year 1839.

The above is an admirable portrait of the thorough-bred Ayrshire Cow, Ellen McGregor. The origin of the present race of Ayrshire Cattle is a matter of dispute: some have maintained that they were produced from the native breed crossed with the Alderney bull, while general tradition affirms that they proceeded from a fortunate cross or a succession of crosses with some foreign stock—probably the Holderness: certain it is, they are a favourite breed, bearing many excellent points, and forming altogether a very profitable and convenient stock for small possessions; their colour, too, rendering them as beautiful for the park of the wealthy as a herd of deer, and fashionable as dairy stock throughout the country.

Mr. Aiton's description of the Ayrshire Dairy Cow is faithful: he says, "The shapes most approved of in the dairy are as follow: head small, rather long and narrow; horns small, clean, crooked, and their roots at considerable distance from each other; neck slender, tapering towards the head, with no loose skin below; shoulders thin, and fore-quarters light; hind-quarters large; back straight, and broad behind, the joints rather loose and open; carcase deep, and pelvis capacious, wide over the hips with round buttocks; tail long and small; legs small and short, with fine joints; udder capacious, broad and square, stretching forward, neither fleshy, low hung, nor loose; the milk veins large and prominent; teats short and pointing outwards, and at great distance from each other; skin thin and loose; hair soft and rather woolly; the head, bones, horns, and all parts of least value, small, and the general figure compact and well-proportioned."

He then goes on to say, "The qualities of a cow are of great importance: tameness and docility of temper greatly enhance her value. Some degree of hardiness, a sound constitution and a moderate degree of life and spirits, are qualities to be wished, and are those which are generally possessed by the Ayrshire cow, but her still more valuable property is, she yields much butter of superior richness, and after many years of service, can be readily turned into beef of the first quality." The average quantity of milk is estimated at 600 gallons annually, from each cow in good dairies.

Other estimates, however, are higher; for Mr. Aiton adds, "To sum up all, I repeat, that hundreds and thousands of the best cows, when well fed, yield at the rate of 1000 gallons of milk per year, four gallons of which will give one pound and a half of butter; that 27½ gallons of milk will give one stone and a half, imperial weight, of full milk cheese, and that at a proper season, and when a healthy calf is fed, and the price of veal is as high as for the last fifteen years, their milk will yield a profit in veal equal to eight pence (16 cents) per gallon:" while Mr. Rankine declares that he considers this statement too high, and the calculations not well founded. Will those possessed of this favourite breed, harmonize these conflicting testimonies?

For the Farmers' Cabinet.

Operations of Lime in Agriculture.

A POOR MAN SHOULD LIME—A RICH ONE CAN LIVE WITHOUT IT.

The essay of A. S. R. on lime, in the last No. of the Cabinet, is valuable, as it tends towards a developement of a true theory of the action of that most important article in agriculture. The attempts heretofore made to explain its beneficial action, on the gratuitous assumption of its hastening the putrefaction of vegetable or animal matter, have entirely failed—not being founded on facts.

That lime, and all the alkaline earths and alkalies are antiseptics, and tend to impede or diminish the tendency to putrefaction, may be easily tested by any person disposed to make the experiment.

Having, some years since, caused lime to be applied to both animal and vegetable matter with a view of reducing them speedily to a state of decomposition, I was much surprised and disappointed in finding that precisely the contrary effect was produced by it; and when I was brought to reflect on the subject, I could recur to numerous cases where it had been used with complete effect, to preserve from destruction the substances it was placed in contact with.

The *destructive* decomposition of *quick lime*, when mixed with vegetable matter, is no more an argument in favour of its producing putrescence, than it would be to say that fire was the best means of producing the same effect; and it is scarcely to be supposed, that a farmer would ever think of burning a stack of straw or corn fodder, with a view of converting it into manure.

All the alkalies and alkaline earths are well known to be highly beneficial to agriculture, and it is believed that this benefit is, at least in *part*, owing to their counteracting the too rapid decomposition of vegetable matter in the soil.

The action of lime in agriculture is believed to be as follows, viz:

1st. After it has had time to become dissolved by the action of water holding carbonic acid gas in solution, which never fails to dissolve it, it penetrates and permeates every particle of a tenacious soil, and renders it more loose and friable, so as materially to extend the pasture of the roots of plants, because they can, by extension, procure nutriment from every portion of it.

It also more readily admits the nutricious solutions, produced by rains, to make advances by *capillary attraction* to the spongioles of the roots which take it in.

2d. The increased friability of the soil produced by lime, enables it to hold much more water in solution without injury to plants, and when there is a deficient quantity of rain to promote healthy vegetation, this excess, which is retained as by a sponge, is gradually given out to the parched earth, and the nutriment which is held in solution, is conveyed to the hungry mouths of the plants, and keeps them in health and vigour, at a time when those growing on a soil which has not been rendered loose and friable by lime, are ready to perish for want of food. Hence the application of lime, acting in concert with thorough tillage, is the best known protection against the destructive effect of excessive droughts.

3d. Lime, by impeding the putrefaction of manure, prevents the too sudden and too rapid formation of its solution, by which it is liable to great waste, by being sunk too deep in the soil or otherwise lost, when the plants are in an infant state, and do not require so large an amount of food to be cooked suddenly. Hence the effect of manure is more enduring and regular in its operation where lime has been judiciously applied to the soil.

4th. The alkaline character of lime enables it to neutralize the acidity of the soil, and, by that means, to furnish a more sweet and palatable food for plants, and they in turn are rendered more sweet and nutricious for man and animals to feed upon.

5th. Lime is a specific food for plants in a greater or less degree, according to their nature—for it is found by analysis to be a component part of them, and must therefore have been taken up in their food.

The best mode of applying lime is believed to be on the grass sod, as the carbonic acid gas is most abundant in the surface soil, and the grass soon covers the lime and keeps it moist, when the dews and rain, taking the gas into solution, come in contact with the lime and dissolve it; it then penetrates the soil in every part, and when the roots of plants or other causes rob the solution of its excess of carbonic acid, down falls the carbonate of lime, and prevents the adhesion of the particles of the soil; hence its friability. This alternate solution and deposition of the lime will continue to take place in the soil, until it is wholly taken up by the crops, or has sunk beneath the reach of the fibres of the roots.

Forty or fifty bushels of lime applied to an acre of stiff land, will produce a greater effect in altering the constitution of the soil, than five thousand bushels of sand, in consequence of the more thorough incorporation of the former with the soil—it being distributed when in a state of solution, and reaching every particle of the adhesive mass, and applying to it a non-adhesive substance.

When lime is applied to a loose sandy soil, the sand not being pervious to its solution, it

passes between the particles and produces adhesion, so as to render it more tenacious, and consequently, more retentive of moisture; in other respects its operation is the same as on a clay soil; but a sandy soil being warmer than clay, manure decomposes in it with much more rapidity, and its effects are more transient; of course, the antiseptic operation of lime is, in that respect, more important to it than to a stiff, cold soil.

The prevalent opinion, that carbonate of lime is insoluble, has led to many errors in regard to its mode of operation in promoting vegetation; but chemists have long known, that water, holding carbonic acid gas in solution, dissolves it readily. The surface soil, particularly where vegetable matter is abundant, contains much of this gas, and when the rain falls—particularly if it falls gently—it takes it in solution, and if it comes in contact with carbonate of lime, it dissolves it and forms what is generally called *lime-stone water*; and this, it is supposed, is what is so beneficial to plants—for lime while undissolved, can render them no service. Hence lime requires time to dissolve before it acts, and in some seasons its action is less conspicuous than in others.

All the lime-stone water of wells, and that which issues from springs, is formed by the above natural method; and the fissures in rocks, caves and sinks, which abound in lime-stone districts, are produced by water impregnated with carbonic acid passing over them, and carrying away the stone in solution, leaving the cavities, which are so numerous in our country.

Your valuable correspondent, A. S. R., in his interesting essay, uses the terms *humic acid*, and *humate of lime*, which, not being generally understood by farmers, I beg leave to explain—having had some trouble to find their meaning, myself.

When vegetable bodies putrefy on the surface of the ground, they at last leave a blackish-brown powder, to which the name of *humus*, or *geine*, has been applied, and this substance when united with oxygen, is *humic acid*, or united with lime, is called *humate of lime*. *Humus* is a Latin word, and *Geine* is Greek, and means the same thing precisely.

AGRICOLA.

Suitable Dress.

THE labours of the farmer are nearly all such as require a free use of the limbs, especially the arms; cast off, then, those useless, inconvenient bands of the shoulders—those braces; let the lower garments be made short, so as to button close above the hips; lengthen the vest—a coat to meet them—the expense of the latter being nearly or quite saved in the former; and then when you go forth to labour, lay aside the outer garment, and nothing restrains the free use of the arms, save the loose shirt. In mowing, raking or pitching hay; in cradling, reaping, binding or handling grain to the barn; in shovelling, chopping, threshing, fencing, draining, ploughing—in short, in almost any labour the farmer has to perform, such an arrangement of his dress would aid him much—*how much*, he can not know until he has tried it. I have long proved it by experiment, and, although out of fashion, shall still continue it.

Again—it is thought because the farmer shovels manure, holds the plough, drives team, and does a hundred other things, that therefore he must, of course, be constantly dirty, not fit to be seen; but it is not so: a *shovel* is made to handle the manure with, and following the plough or driving team, may be done without getting dirty, if one is suitably dressed. Every farmer should have a frock—a sort of over-all, to put on outside his vest or coat, as the weather may require, coming just below the knees, and buttoning in front, with a belt around the waist, two pockets, in which to rest his hands, when not immediately engaged—a great luxury—to be made of cotton for summer, and woollen for winter. Such a frock is put on or off without trouble; there is no putting over the head, and it catches all the flying dust that comes from rubbing against the team and elsewhere, and leaves the clothes at the end of the week as clean almost as they were on the Monday morning. It saves *much* in a cleanly man's feelings; *more*, in the wear and tear of garments, and *most of all*, in the labour and patience of the women, who of course deserve, and that righteously, to be consulted in such matters.—*Selected from the Yankee Far.*

Female Dress.

"THERE is not an hour in a day in which a man more likes to see his wife dressed with neatness, than when she leaves her bed-room and sits down to the breakfast-table. At any other moment, vanity may stimulate her efforts at the toilette, for she expects to be seen; but at this retired and early hour, it is for the sake of cleanliness alone, the very sake of pleasing her husband, that she thus appears neat and trim. Some one says, a wife should never appear untidily or badly-dressed in the presence of her husband. While he was a lover, what a sad business if he caught her dressed to disadvantage! 'Oh dear, there he is, and my hair all in papers! and this frightful, unbecoming cap; I had no idea he would be here so early; let me be off to my toilette!' But now that he is your husband, 'Dear me, what consequence

is it? my object is gained, my efforts to win him and my little manœuvres to captivate have been successful, and it is very hard if a woman is to pass her life in endeavouring to please her husband.' I remember greatly admiring a lady who lived amongst the mountains, and scarcely saw any one but her husband; she was rather a plain woman, yet when she sat to breakfast each morning, and all the day long, her extreme neatness and the attention to the niceness of her appearance, made her a most agreeable object; her husband loved her, and would look at her with more pleasure than at a pretty woman dressed soiledly and untidily; and believe me, these things—although your husband appears not to notice them, nor perhaps is he conscious of the cause—strongly possess the power of pleasing or of displeasing.—*Whisper to a New-married Couple.*

To the Editor of the Farmers' Cabinet.

Different Breeds of Sheep.

Sir,—I find in the Tennessee Farmer an article on this subject credited to the Western Farmer and Gardener, which is truly astounding, and quite unaccountable to any one acquainted with the business. Allow me to copy the statement and add a few observations in conclusion; for as the case now stands, it is sufficient to astonish every one, whether foreigner or native.

"In the Western States, where land is, of course, not so valuable as in the east, the Bakewell breed of sheep, although of a more tender constitution than the Southdown or Cotswold, and of coarser and smaller fleece, may yet be advantageously kept for their wool, notwithstanding its quality is rather coarse. It appears, however, from all the information on this subject, that the Southdown and Cotswold are much hardier, better nurses of their lambs, require less attention during winter, and will live on shorter pasture in the summer. The Merino and Saxon sheep have often too much the same objection as the Bakewell; they are of rather weakly constitutions, and not very good in rearing their lambs. *Some* of the Southdown wool is *pretty* fine and makes good cloth, and the mutton is perhaps superior to all others, excepting some of the small Welsh breeds; their constitutions are strong, and they will make a living in any situation: the Cotswolds too are equally hardy, but require richer keep, their fleeces are heavy, and their quarters have been known to reach eighty pounds each, in England. Some of the Southdown and Cotswold lambs have weighed, at six months old, sixty pounds, and when full-grown, two hundred and forty pounds. We subjoin a comparative statement of the value of the different breeds of sheep.

1st—Saxon lambs, 6 months old,	18 lb. at 6 cts.,		$1 08
Merino	20		1 20
Bakewell	30		1 80
Cotswold	60		3 60
Southdown	50		3 00
2d—*Their Wool.*			
Saxon fleece	3 lb. at	40 cts.	1 20
Merino	3	31	93
Bakewell	5	20	1 00
Cotswold	10	25	2 50
Southdown	5	31	1 55
3d—*The Value of Sheep when full-grown.*			
Saxon sheep	50 lb. at	4 cts.	2 00
Merino	60		2 40
Bakewell	110		4 40
Southdown	240		9 60

But I find I have set myself a task which I cannot accomplish; it was my intention to show that the account must be erroneous in some particulars, but it is so egregious, that it would be much better for the writer to wipe all out and begin again; he can certainly come nearer than that to the mark, if he will try; for what on earth could induce him to think that the Bakewells could be advantageously kept for their wool, when he admits they are more tender and weakly in their constitution, coarser and lighter in their fleece, worse nurses, requiring more attention during winter, and better pasture in the summer than the Cotswold and Southdown! I should be glad to know if he have not attributed to them every disqualification he can possibly imagine. And if he is at all acquainted with sheep of the Southdown breed, he will find that their wool is not only *pretty* fine, but *very* fine; it being considered one of the best native clothing wools of England, and the writer himself puts it at the same price as the Merino! It is news also to hear that the wool of the Cotswold is worth more by five cents per pound than that of the Bakewell. But when we find a Bakewell lamb at six months old weighing only seven and a half pounds per quarter, while the Southdown lamb of the same age shall weigh twelve and a half pounds, we certainly have a right to ask the writer from whence he has collected his information? while a Cotswold lamb of the same age, weighing fifteen pounds per quarter, must be a rouser!

In the account of the value of the wool, too, the fleece of a Bakewell is exactly the same weight as that of a Southdown—no more—pooh, pooh! man, try again! But in the account of the value of the full-grown sheep, the writer has gone the whole hog—fleece and all—making the Bakewell to weigh twenty-eight pounds per quarter, but the Southdown *sixty!* now, after that, he may stop his hand; the most fastidious of us must be more than satisfied. And where did he learn that the Cotswolds have been known to weigh eighty pounds per quarter in Eng-

land! I once saw there a Cotswold sheep, shown as a great curiosity, weighing 62¼ pounds per quarter, which had more the appearance of a small bullock than a sheep—but I can't come it any stronger than that—although it leaves the difference of seventeen pounds and three-quarters per quarter, between us, or seventy-one pounds on the whole sheep—not a trifle. But indeed the whole statement is so surprising on more accounts than one, that I think the writer is bound to revise it, and give us a second edition, with corrections.—No wonder there is such a prejudice against book-farming!

After all, however, I do not *say* that I doubt the writer's word, remember; I only say, as the man did, when told of a terrific crop of potatoes—"I should like to see 'em 'are taters mishured." AGNUS.

P. S. I find the article, "On Large and Small Farms," transplanted from the Farmer's Cabinet into the Western Farmer and Grazier, without due acknowledgment—this is bad, but it is worse, to find the same article copied from thence into the Tennessee Farmer, and acknowledged to the Western Farmer and Gardener. The article on the manufacture of Cider, by the late Joseph Cooper, taken also from the Cabinet, is, in the Tennessee Farmer, credited to the "Agriculturist." In the Western Farmer and Gardener, for the last month, are two other papers from the Cabinet, *not paid for*: look out, Mr. Editor, and see that every one has his own.

For the Farmers' Cabinet.

Audi alteram partem.

MR. EDITOR,—I find an excellent article in the Baltimore American Farmer of the 2d of this month, from which I wish to make a few selections for your pages. It is on an important subject—the rearing of live-stock—which is handled in a plain practical manner by the editor of that very interesting Journal, and will go some way, it is believed, to promote that greatest interest of our common country, stock-breeding.

The worthy editor first gives us an extract in favour of the Durham cattle from the "Tennesee Agriculturist," for the sake of contrasting it with the testimony of a well known and highly valued Breeder, General Davie: and by putting this and that together, perhaps we may be led to see that a good cow, any more than a "good hound," cannot be of a bad colour: indeed it would appear that the age of nonsense is fast passing away.

"The Agriculturist says, 'It is a matter of *no* dispute at this day, that the Durhams are transcendently superior in *all* respects to *every other* breed of cattle.' He adds, rather awkwardly, 'To be sure we find *one* occasionally, who doubts the assertion, but we take it for granted that such *are* entirely inexperienced with the genuine stock. The following are the superior qualities for which we strenuously contend in the Durhams, and which we shall continue to advocate, till we are convinced to the contrary.

1st. They will keep in better order and be more thrifty on the same quantity and quality of food than *any other* breed with which we are acquainted.

2. They mature sooner than any others.

3. They are the best stock for beef, and are worth at least one third more for this purpose than any others.

4. For milk, Durhams are generally much preferred to other breeds.'

Per contra—General Davie, who has traversed the three kingdoms, looking with anxious curiosity at all sorts of stock, and sending home specimens of Short Horns and Ayrshires, states the following fact, which he noted in regard to Short Horns, which is in accordance with his general observations.

'On passing through the estate of the Duke of Sutherland, I observed in one field about a hundred head of Highland black cattle, and in another, about thirty-four Durham cows; and on inquiry, I was told, it was the custom for the duke to bring from his estates in Scotland, 200 black cattle every year for feeding, and as the pastures were eaten by the Durhams, they were removed to fresh grass, and the black cattle succeeded them, never failing to get into fine condition, where the Durhams could barely subsist.'

Now the opinion of the "Agriculturist" is founded, no doubt on observation, and is unprejudiced, but limited as to time and extent of opportunity; while General Davie's springs from observation and the view of numerous herds in England, Scotland, and probably Ireland; and if we possessed the luxuriant blue grass pastures of Kentucky, we would covet the Short Horns to turn them into beef, still believing, where there is no restriction as to kind, and no limit to the quantity of food, a Short Horn bullock is the most beautiful machine that has yet been constructed for converting these rich substances into meat; yet we are not quite convinced that—where the beef is to be sent on the hoof and not in the barrel, a long distance to market, that a single dip of the Short Horn blood on the country stock, would not be the better system for graziers generally—and this was the opinion of the late Mr. Steenberger, a most sagacious and experienced grazier—but after one dip, let him select his best for breeders. And this detracts nothing from the value of the Short Horns, when it is considered that the thorough-bred bull of that breed is indispensable

to the amelioration of the country stock of that vast region, where, for all that are raised for a century to come, in all probability the demand will be greater than at present—as that must continue to be a beef-exporting district; and after the lapse of twenty years we find the same breed of animals still increasing in value.

But to repeat the opinion, the correctness of which we believe time will prove—in the non-provision-growing states, where animals have to rough it, and where the farmer goes for beef, the yoke and the dairy, and not beef *alone*, in the shortest time and from the smallest number of animals—a combination of the objects above mentioned—from food, such as it is, and care, such as it is—the North Devons will supersede the Durhams; and this is the opinion of a gentleman of Maryland, who a year or two since purchased some choice specimens of the Short Horns at Whitaker's sale in Philadelphia. It is now twenty years since the first introduction of the North Devons into Maryland, and those into whose hands they originally came, still retain them; and good, genuine individuals of this stock are very difficult to be obtained, either here or in New England, where the Devons, or cattle in which that blood greatly predominates, have been great favourites from the days of the Pilgrim Fathers to the present time; and we know a herd that we would be willing to show against any dairy herd of equal number in any country, not perhaps for size to age, nor for extreme diminutiveness of either head or *tail*, but for clean, bony head, fine muzzles, good handling, beef of fine quality, *sureness to breed*, sound constitution, yellow skin, rich milk of fair quantity, and, as respects oxen, of extraordinary docility and activity: and it would give us pleasure to introduce them to the notice of our worthy friends the editors of the "Agriculturist," as well as whatever else we can find for their gratification; amongst other things, some

"WHITE BERKSHIRES,"

or at least, excellent white hogs, bought in England, without restriction as to price, and sent to this country under the name of Berkshires—large sized hogs, good breeders, and good nurses, with, it is true, not very small *pipe stems*, nor very short duck's legs, nor coming quite up to such a portrait of beautiful symmetry and proportion as a lively imagination might create, such as we sometimes meet done in *black letter*, in certain agricultural books and journals; but such as have legs under them that might be trusted to carry them to market; and amongst the rest, a White Berkshire sow, so called at least, with black spots on the *skin*, which was sold but a few days since for $100, got by the white boar belonging to Mr. Etches, spoken of in the "Agriculturist" by General Davie, who says, "The Earl of Durham has a boar of this breed pure white, estimated at two years old, to weigh 45 score! (900 lbs.) Mr. Etches of Liverpool had a boar of the same breed, not so pure a white; the premium boar at the Lancaster fair in 1838, at 20 months old was estimated to weigh 800 lbs: these were represented as genuine Berkshires, and questioned by none."

Huntsmen say, there never was a good hound of a bad colour; and after all, it is of no great consequence what may be the colour of the hog, provided always notwithstanding, that if he be a Black Berkshire he have not more than three white hairs in his tail!—so he is right in shape and proportion, and adapted in these to the condition of circumstances, country and views of the purchaser, for, as "a rose by any other name will smell as sweet," so will this omnivorous quadruped eat as sweet *himself*, by one name as another: only observing, he who is desirous of improving his stock of swine should go for the *best*, and not for the *cheapest*."

Thus far the editor of the American Farmer—and it is refreshing to find such a man coming out on the side of reason and common sense. After all however, every thing depends upon *expediency;* in rearing stock for his own use, the farmer will be guided more by the good points of the animal than by the colour, either of the feet or tail; but if his object be to breed for sale, it is *expedient* that his stock should have the requisites to suit the fancy of his customers, be they white with black tails, or black with white tails; nor will it answer his purpose to offer one for the other, any more than it did the storekeeper's, who, on being asked for white cotton stockings, replied, he had excellent black worsted, at the same price! As has already been said, however, for every good purpose, a single "dip" with a *good* Berkshire and the Chester county sow, will be found quite sufficient; and, "in the language of an eloquent writer, now no more," enough 's enough, and that 's sufficient! JOHN BARNES.

Lancaster co. 12th Dec. 1840.

Strength of Iron Pillars.—At the late meeting of the British Association in Glasgow, a paper was read by Mr. Hodgkinson describing a series of experiments made by him on the strength of iron pillars. It appeared from these, that a pillar, square at the top and bottom, is about three times as strong as one rounded at the ends; that if the pillars are not placed perpendicular, at least two-thirds of their strength is lost; and that they are one-seventh stronger when swelled in the middle, like the frustrum of a cone with the base in the centre of the pillar.

For the Farmers' Cabinet.

OBSERVER—No. 23.

Lightning Rods.

We have all experienced the terrors of a thunder-storm, and there is no doubt that we would all be willing to avail ourselves of some security against its dangers, if we only *knew* how and where it could be found. Save the *miraculous interposition* of an overruling Providence*, there is no safety in those perilous seasons, but that which the *Ægis of Science* — the LIGHTNING ROD — affords. But how can we expect those who are unacquainted with electrical science to repose confidence in the *rod?* How can they feel an assurance that it can operate their safety? Or, — how shall we expect those mechanics who *put up* lightning rods, to fulfil all the requisitions of science, without knowing what those requisitions are? If they seek for *practical directions*, they are mostly ambiguous and altogether unsatisfactory, and often lead into the grossest errors. Under these circumstances, it is not too much to say that very few conductors are properly constructed.

The foregoing remarks were elicited by reading the account given by N. J. Sharpless (p. 105), and the *extraordinary* commentary upon it by C. J. (p. 124.)

C. J. very properly observes that "the interesting account is highly deserving of the serious consideration and examination of your scientific readers." It is so. But he must allow me to loose the hand of fellowship when he adds, "here is a conductor perfect in all its parts, and erected with the most scrupulous care and attention."

The "interesting account" of N. J. Sharpless seems not to have been quite so "perfect in all its parts" as his lightning rod, in the estimation of C. J.; for he has found it necessary to amplify considerably, by inserting particulars in his *commentary*, which are not found in the *text*. Thus—

N. J. Sharpless.	C. J.
"It is not quite clear to me that the electric fluid passed to the cows at all. Possibly they were killed by the shock only, for I believe that such instances have been known; and yet, from the appearance of the wall, the electric fluid must have passed through it, in the direction of the cows, although no traces of it could be found on their dead bodies."	"While one portion enters the ground, another penetrates a two-foot-thick stone wall, separates again at the other side, and traversing the building in a zigzag direction, kills two cows which lie at a considerable distance, and at *right angles* one from the other and from the point where the fluid entered the building."

* Electrical phenomena are subject to *fixed laws*, the regular operation of which can only be suspended or changed by the Power which established them. Such an event would therefore be as much of a miracle as that of the sun standing still for Joshua, or its shadow going ten degrees backward on the dial of Ahaz.

I have no means of knowing whether C. J. had other sources of information (if so, he ought to have stated them)—or whether he only used *strong language* inadvertently while making out *a case* to sustain a certain *position*. What his position is, will appear from the following remark: "Now it has been said that an instance such as the above has never occurred — that it *cannot* occur if the rod be perfect in all its parts." But C. J. has already told us that Sharpless's rod was "perfect in all its parts." The conclusion, therefore, which we must draw — which he obviously intended we should draw — is that the assertion is *untrue*.

In the Cabinet, Vol. 3, p. 74, the following sentence occurs, which I here repeat: "So far is the rod from presenting a point for the lightning to strike to, that I believe it impossible for it to do so when the rod is properly constructed in every particular. This is undoubtedly true under all ordinary circumstances."

Now as this is the passage to which C. J. appears to have allusion, and as its correctness is completely disproved by his *ipse dixit*, it behooves me to enter into a "serious consideration and examination" of the *facts* of the case.

The lightning rod of N. J. Sharpless appears to have been constructed with commendable care—much greater than is usual in such cases; yet the account will by no means justify the assertion that it was "perfect in all its parts."

1. The point of the rod was found to be wanting after the explosion, and there is no evidence to show that it was certainly *in place* at the time of the accident. It might have been displaced by some other casualty than a stroke of lightning.

2. We are uninformed how the rod was joined together, and by what means it was attached to the building.

3. Was the rod overtopped by trees or other contiguous objects?

4. Was the ground naturally dry or moist? —pervious or impervious to water? Did the accident occur in a season of drought? In short, what was the actual condition of the earth about the rod at the time?

It is necessary to possess correct information on all of these points before we can determine that the rod was "perfect in all its parts, and erected with the most scrupulous care and attention."

Happily, however, the information before the public is amply sufficient for my present purpose. The rod was not "perfect in all its parts"—because

1. It was *too short at its upper end*. Five feet is by no means a sufficient elevation above *so wide an expanse* of roof. "The

length of the rod should always be such as *to elevate its point as far as possible above the top of the building and every contiguous object.* This should be carefully attended to; for it is found that all objects, such as chimneys, trees, &c., when near to the point, diminish its effects in a rapidly increasing ratio to their height, till they render it entirely useless." (Vol. 3, p. 76.) If the rod had been sufficiently elevated, there is reason for believing that its other parts were sufficiently perfect to have passed a *gradual stream* of electricity to the earth equal to the *prevention of the stroke.*

2. The rod was *too short at the lower end.* We are told that it penetrated three or four feet into the ground, at an angle of 45° with the wall. This would give the end of the rod a depth of only three feet at most—perhaps not more than two. "The rod should be planted *so deep as to insure its connexion with moist earth even during the driest seasons.* Dry earth is a nonconductor of electricity; hence, if it becomes dry about the foot of the rod, the passage of the fluid from the cloud to the earth becomes interrupted and the rod rendered useless." (Vol. 3, p. 76.)

There are probably few eligible sites for building, where the earth at the depth of three feet will always continue moist;—consequently, where the rod would at all times be in a proper condition for affording adequate protection. This appears to have been the case in the present instance.

Electrical phenomena are only manifested by the *resistance* which the fluid meets with in passing through bodies. If all substances were perfect conductors, it would diffuse itself equally through them, and we would not even possess a knowledge of its existence. When, in its progress, it meets with an imperfect conductor, an *accumulation* takes place and increases until it acquires an *explosive force* sufficient to overcome the resistance.

Let us apply this principle to the case in question. If the stratum of air which separated the cloud from the earth had been a good conductor of the electric fluid, it never could have accumulated in the cloud. Without such an accumulation, the fearful explosion could not have taken place.

The rod, so far as *its integrity was preserved*, was a good conductor. This is manifest; for the electricity passed harmlessly down it near to the ground, where it was arrested—not by the rod itself—but by the connecting surfaces between it and the earth. The communication with the earth was not perfect—the chain of conducting materials was broken. By this means the dispersion of the fluid was retarded, producing an accumulation in the rod, until it acquired sufficient force to overcome the resistance of passing through the wall by another explosion. However perfect the other parts of the rod may have been, there was a *palpable defect at its lower end.* I feel assured that I shall be sustained in this conclusion by every competent *electrician.*

A quotation which C. J. has made from Gay Lussac most strongly corroborates this view of the case. "When it (a lightning rod) has any break in it, or *is not in perfect communication with the moist soil, the lightning having struck it* flies from it to some neighbouring body, or divides itself between the two, in order to pass more rapidly into the earth.* Frequent instances of ruinous accidents have occurred from both these causes." Yet C. J. strangely says that these "observations *do not apply to the rod in question*,"—and for why?—because, forsooth, "that was perfect in all its parts." Lussac has exactly described the case.

Having satisfactorily shown that N. J. Sharpless's rod was materially defective, and that to this defect may be attributed the "ruinous accident" which occurred, it is perhaps not necessary to follow C. J. in his remarks on the *diameter* of conductors. As has been already remarked, the conducting power of the rod was adequate to the occasion until the fluid met with resistance at the lower end.

If our friend N. J. Sharpless has any additional facts to communicate respecting his rod or the effects of the lightning, I would thank him to do so through the medium of the Farmers' Cabinet.

In conclusion, I may say to C. J., that so far from asserting "that an instance *such as the above* has never occurred—that it *cannot* occur,"—it is matter of astonishment to me that *such instances* do not happen much more frequently. Their infrequency furnishes strong evidence that even imperfect conductors afford a great amount of protection. But "a conductor perfect in all its parts, and erected with the most scrupulous care and attention," would differ in numerous particulars from those of N. J. Sharpless, and more effectually serve the purpose for which they were designed.

New Garden, 12 mo. 10, 1840.

P. S. Since the above was written, I have observed, over the signature "*Agricola*" (Vol. 5, p. 72), the following remark: "Perhaps no instance can be cited of a building not more than sixty feet in extent from the point of a properly arranged conducting rod,

* The reader must constantly bear in mind that the "stroke" alluded to by Lussac is the *effect* of the "break" in the rod, or of its imperfect "communication" with the earth. The *object* of the rod always is to *prevent* the stroke by a *gradual drainage* from the cloud: its failure to do this is good evidence that it is not "perfect in all its parts."

ever being injured by electricity." The sentiment is probably correct; but I wish to caution my readers against the practical inference which may be drawn from it, viz.—*that sixty feet is the distance to which a good rod will extend protection.* "No such distance can be assigned, because it continually varies from nothing up to an indefinite extent, as the intensity of the electric charge, and other circumstances, vary." (Vol. 3, p. 75, 346.)

The same writer says—"Bright surfaces appear to attract the electric fluid with the greatest force." Will Agricola please to inform me how and where I can observe such an *appearance.* I know that such an *opinion* prevails, but I have yet seen no *appearance* to attest its truth. It remains to be my opinion that "brightness is only necessary as a security for sharpness." (Vol. 3, p. 76.)

My readers are requested attentively to peruse 'Observer,' No. 16, Vol. 3, p. 73, and No. 18, p. 346, where much scientific and practical information may be obtained.

The Span Level for Irrigating Meadows.

"At the level of the water where you begin, drive a pin into the ground, on which one leg of the level can rest, then bring the other leg round, until it touches the ground on a level with the top of the pin, and then drive in another pin; and, having adjusted the level most perfectly, make use of this last pin as a rest for one foot of the level, turning the other about, until you find the level in the same way, and so proceed. Thus you discover the precise direction that the watercourse should hold, without digging through heights or filling up hollows.

This is for the purpose of conducting water *perfectly level;* if *declivity* is to be given, amounting to one-quarter or one-half an inch or more in every twelve feet—which is the span of the level—instead of wooden pins make use of one pin of iron, having inches, halves and quarters marked on the side, from the square top downward, and have a number of wooden pins cut neatly at the top, quite smooth or square. After fixing the iron pin quite level with the first, drive a wooden pin into the ground close by it, making its head go one-quarter or one-half inch lower than the top of the iron pin; then, pulling out the iron pin and employing the *wooden* one as a rest for one of the legs of the level, put the iron pin in again for the other leg, and driving another wooden pin by the side of it one-quarter or one-half an inch below as before, take up the iron pin and proceed forward after the same manner, and the canal will have the same uniform degree of slope throughout its whole extent, and the fall can be regulated to any assignable degree."

Hessian Fly.

Discovery believed to have been made in relation to the Hessian Fly.

COMPILED FOR THE FARMERS' CABINET,
BY BENJAMIN H. COATES, M. D.

A PAPER presented to the American Philosophical Society by Miss Margaretta H. Morris, of Germantown, and relating to the abovementioned subject, was subsequently ordered by that body to be published in their Transactions. As, however, some time will elapse before the appearance of the number of the Transactions which will contain her paper, we have thought that we could better serve the agricultural readers of the Cabinet by extracting the information given in a journal recently authorized by the Society to be published by its Secretaries, in an abridged form and of earlier appearance. In the "Proceedings" just printed for November and December, 1840, we find the subject mentioned, in some paragraphs of which we here subjoin a copy.

"The Committee, consisting of Mr. Nuttall, Mr. Lea, and Dr. Coates, to whom was referred a communication by Miss Margaretta H. Morris, on the Cecidomyia Destructor or Hessian Fly, reported in favour of publication, which was ordered accordingly.

"The Committee express the opinion, that should the observations of Miss Morris be ultimately proved correct, they will eventuate in considerable benefit to the agricultural community, and, through it, to the public. Miss Morris believes she has established, that the ovum of this destructive insect is deposited by the parent in the seed of the wheat, and not, as previously supposed, in the stalk or culm. She has watched the progress of the animal since June, 1836, and has satisfied herself that she has frequently seen the larva within the seed. She has also detected the larva, at various stages of its progress, from the seed to between the body of the stalk and the sheath of the leaves. In the latter situation it passes into the pupa or 'flaxseed state.' According to the observations of Miss Morris, the recently hatched larva penetrates to the centre of the straw, where it may be found of a pale greenish-white semi-transparent appearance, in form somewhat resembling a silk-worm. From one to six of these have been found at various heights from the seed to the third joint. They would seem to enter the pupa state about the beginning of June.

"This fly was not observed by Miss Morris to inhabit any other plant than wheat.

"To prevent the ravages of this destroyer of the grain, it will be proper to obtain fresh seed from localities in which the fly has not made its appearance. By this means the crop of the following year will be un-

injured; but in order to avoid the introduction of straggling insects of the kind from adjacent fields, it is requisite that a whole neighbourhood should persevere in this precaution for two or more years in succession. This result was obtained, in part, in the course of trials made by Mr. Kirk, of Bucks County, Pa.. with some seed-wheat from the Mediterranean, in and since the year 1837. His first crop was free from the fly, but it was gradually introduced from adjacent fields; and in the present year the mischief has been considerable. As Miss Morris states that the fly has never made its appearance in Susquehanna and Bradford Counties, seed-wheat, free from the fly, might be obtained from these, and probably from other, localities.

"The Committee recommend that the conclusions of Miss Morris 'may be subjected to the only efficient test —repeated observations and effective trials of the precaution she advises.'"

Believing the above to be an observation of very considerable importance, and sincerely hoping that repeated trials and examinations may confirm its correctness, we have prepared the present notice for the Cabinet, in order to bring it before the agricultural community.

Miss Morris's observations and inferences agree very well with what we know of the habits of many insects. Thus they are, as a general rule, not produced till their food is ready for them; while their eggs appear to approach the seeds of plants in the power of enduring long delay and some violence, before they lose their vitality and faculty of development. The eggs of silk-worms are kept for various periods, and still retain the susceptibility of being hatched. How long this power, in some insects, may be capable of enduring, has not been ascertained; but the presumption arising from their analogy to seeds leaves it by no means certain, (until observations are made,) that the period may not be one of magnitude. The lower animals are said by naturalists to approach, in constitution, much more nearly to vegetables than to the more complex beings of their own class; and this is acknowledged to be strikingly exemplified in the instance we have been reciting. Something analogous may be perceived in the instance of the common fowl; in which species, the eggs first laid are allowed to remain till enough are accumulated for the parent to commence sitting, and without in any way injuring the product.

That highly and justly distinguished American naturalist, the late Thomas Say, has left us an entomological description of the Hessian Fly, in the first volume of the Journal of the Philadelphia Academy of Natural Sciences. He appears never to have identified the insect in an earlier portion of its life than the flax-seed state. Thus, he describes the *larva*, first state or "maggot" of the animal, as resembling the *pupa* or second state, except in the dark, reddish-brown colour of the latter; and alleges that, "when taken from the culm, it is almost inert, exhibiting very little motion to the eye." This was in 1817; and as that eminent writer was principally occupied in the task, then new, of describing and classifying American insects in their perfect forms, it is entirely credible that he might have erred in relation to their earlier stages; nor is it wonderful that, in 23 years, further discoveries should be made, and his account corrrected. What Mr. Say calls the larva, will, if Miss Morris be correct, be considered the early period of the pupa.

The discovery of Miss Morris, then, appears principally to resolve itself into the fact of the egg being deposited in the seed; and into the history of the pale, green worm or larva, as the primary stage of the animal's existence. The account of its periodical change given by Mr. Say is confessedly conjectural; and insufficiently explains the preservation of the species through the winter. His words are, "The history of the changes of this insect is probably briefly this." He then proceeds to describe the parent insect in depositing its eggs within the sheath of the leaves, near the root of the plant, the fixed mode of life of the flaxseed substance, together with the indentations produced in the straw, the distortion of the flaxseed worm when crowded, and the death of the plant. He then adds the following notice; which ends the recital. "The perfect fly appears early in June, lives but a short time, deposits its eggs, and dies—the insects from these eggs complete the history by preparing for the winter brood." The words would seem to imply that there are *two* broods of these flies; one for summer and one for winter. If "preparing for the winter brood," means laying the eggs which are to produce them, why are not the flies seen in the end of October; before which time the sheaths of the leaves and the straw itself of the winter wheat do not exist, and at which period no fly of any description is to be met with in the fields? If, on the other hand, "the insects from the eggs laid in June," are *themselves* "the winter brood," they are to be found in the stubble after harvest; and cannot possibly be the same individuals that are found next spring in the damaged stalks of the new crop.

According to the facts believed to be ascertained by Miss Morris, the difficulty at once disappears. The fly lives only ten days; during which time it deposits its eggs. The eggs remain unaltered till the wheat sprouts; and the young worm is then below the surface of the earth, in a substance which is not frozen, and which supplies him with food.

The residence of the worm, as described by Miss Morris, within the hollow of the straw, is precisely like that of certain other insects. The animal that destroys the more luxuriant shoots of the parsley-leaved elder,

and which, in its perfect state, becomes, as we are informed, a beetle of splendid colouring, passes its larva-existence within the pith of the plant. Additional examples, we believe, are not difficult to be obtained.

To the directions given in the "Proceedings" for avoiding the production of this pernicious insect, little seems necessary to be added. We are inclined, however, earnestly to repeat the recommendations of further trial and observation. It would seem that the farmer who uses seed-wheat from a district ravaged by this animal, actually commits the absurdity of *planting Hessian flies* for the benefit of his next year's crop!!

The precise period at which the minute green worm escapes from the hollow of the straw, to repose and undergo its subsequent changes beneath the sheath of the leaf, is not ascertained with accuracy; and may furnish a question for investigation. We are informed that Miss Morris is continuing her observations on growing wheat; in which she will probably ascertain the fact. It is in the power of our readers to confirm or reject her conclusions, both in this and in what she regards as already established.

With a view to illustrate more fully this interesting and important subject, for the benefit of those who have not studied the branch of natural history to which it belongs, we have determined to offer, 1. an explanation of the meaning of the words *larva*, *pupa*, and *perfect insect*; 2. an account of the Hessian fly as an object of science; and 3. a description of the Ceraphron, a parasitic insect, in reality its enemy, but which is frequently mistaken for it. The two last articles will be compiled from the writings of Say.

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1. All insects, at different periods of their lives, shed their skins or shells. Some of them, as spiders, centipedes, &c. do not very materially change their form in consequence; others, as grasshoppers, acquire wings; while vast numbers change their appearance so entirely as to render it incredible, without ocular evidence, that they were the same animals. Among all these, the class of "true or proper insects," enormous both by the number of individuals which belong to it, and by the number of species under which they have to be classed, assume three successive forms, to which are given the names which we have above recited.

The most convenient and familiar instances of these are drawn from butterflies, moths, and other flies. In these, the insect in its first stage, called, as we have above said, the *larva*, goes generally by the name of a worm, maggot or caterpillar. Examples of these are sufficiently common. Such are caterpillars, and bee and wasp worms. The white substances called "ants' eggs," but larger than the ants themselves, which these animals carry away so eagerly when their nests are opened, are larvas which afterwards produce beings like their parents; and are fed with great care by their purveyors. Larvas of some kinds greatly resemble the fully developed insect; as grasshoppers. It is obvious that no one of the words "worm," "maggot," "caterpillar," &c. would be applicable to all of these; and as they are all analogous, a word was necessary to express them. For this the term larva was adopted; meaning a *mask*; because the visible shell of the insect in this state concealed the forms which were to be displayed after casting it off. *Larvæ* is the Latin plural. In general, the larva seems to have little business in the world but to feed and grow.

In the second stage of their existence, insects can be found, on dissecting them with needles, to possess the wings and other parts which they are to employ in their subsequent condition. These, however, are tender, and at first imperfect, requiring time to become fitted for use. For this purpose many of them, including, we believe, the whole tribe of flies, remain for some time in a state resembling sleep; and when disturbed, rarely exhibit more motion than a momentary wriggling. They are encased in flat rings of shell, generally harder than the skin of the larva; and often of brilliant and showy colours. They are found sometimes naked, in sheltered situations; but in many kinds covered with a web, and adhering to trees, walls, rocks, &c. Of this kind are the masses like pods of plants, seen hanging all winter to the branches of trees. The inside of these casings are webs; and the outside a collection of pieces of leaves, bark and sticks. Other insects in the second stage, differ but little in their appearance from the first and third stages; and others differ in their forms and mode of life to the most amazing extent. Thus, if the writer of these notes apprehend correctly, it is in the first stage that the seventeen-years locust lives under ground, covered with a hard horny shell, and provided with strong arms for digging. Its second stage seems to be a mere short interval of repose, prior to its final change to the winged form.

To express beings so unlike, and yet identical in their analogy, the word "*pupa*" is now generally used. Its original meaning is 'a child in swaddling clothes;' which idea agrees very well with the pupas of flies, as we have been describing them. *Pupæ* is the Latin plural. They have sometimes been called "chrysalises," "chrysalids," or in Latin and Greek, "chrysalides;" terms now less in use than formerly. "Chrysalis," anciently

"chrysallis," was the Greek for a moth, and meant a "thing of a golden colour."

The words "perfect insect" are now generally employed to express these animals when they have undergone the last developments of which their nature is capable; and it is in this state that they have been sometimes, perhaps unnecessarily, called "imago," the image. These terms require no explanation. It is in this stage that the females deposit their eggs.

Experience has shown that, in describing the many thousand kinds of insects met with by naturalists, the purposes of classification and distinction cannot be well answered without making new names from the Greek language for nearly every newly described genus or family, and adding a Latin adjective or substantive, to express the species or more particular kind. One reason, in itself very sufficient in the present case, and which may serve for an example, is that the animal called Hessian Fly is not Hessian at all, but an insect produced only in America. Thomas Say found it to belong to a genus called by high authorities, Cecidomyia; and has himself called this American species, destructor. Cecidomyia expresses, in Greek, "smelling-fly" or otherwise "nutgall-fly;" from kekis, in Latin and English spelled cecis, which means both a smell and a nutgall, and myia, a fly. We are not entomologists enough to know which of these two meanings was designed to be conveyed by the word. The fly is a Tipulide insect, or one resembling the Tipula or "water-spider," that walks on running water, repelling the fluid with its feet; and is a two-winged fly, with poisers or weights. We subjoin the description of the perfect insect, from Mr. Say; which we can neither abridge nor convert into popular language. Besides accommodating those among our readers who have an acquaintance with entomology, it may serve to show the great accuracy sometimes necessary in distinguishing these little beings.

"Order DIPTERA. Genus Cecidomyia, Latreille and Meigen.

Tipula, Linn. and Degeer. Chironomus, Fabricius. Trichocera, Lamarck.

Antennæ filiform, joints subequal, globular, hairy. Proboscis salient. Wings incumbent, horizontal.

Cecidomyia *destructor*. Head and thorax black; wings black, fulvous at base; feet pale, covered with black hair.

Inhabits the northern and middle States.

Body clothed with short, black hairs. *Head* black. *Antennæ* shorter than the body, somewhat smaller towards the tip, verticillate, joints moniliform, separated by a hyaline filament. *Thorax* gibbous, black, glabrous and polished. Scutel prominent, colour of the thorax, rounded behind. *Wings* ciliate, rounded at tip, blackish;—the fulvous colour of the base is sometimes extended upon the nerves of the wing, paler and gradually disappearing before the middle; longer than the abdomen. *Feet* long, slender, thighs fulvous at base, furnished, at the tip, with several very acute claws. *Poisers* pale, nearly as long as the thorax, with a suboval capitulum. *Breast* sometimes fulvous. *Abdomen* brownish.

Female. *Antennæ* longer than the thorax, the joints somewhat oval, not separated by filaments. *Abdomen* elongate-oval, above rectilinear, beneath somewhat ventricose, fulvous, with a dorsal and ventral black vitta widely interrupted by the sutures. *Tail* more or less acute in the dead specimen in proportion as the oviduct is exserted. Length rather more than three twentieths of an inch.

Eggs elongated, linear, pale-fulvous."

The description of the pupa, so familiar under the name of the flaxseed state, we will omit; and Mr. Say makes the larva the same as the pupa, with the exception of a moderate difference in colour, and a little more motion. This, according to the views of Miss Morris, will be held to be the early portion of the pupa stage.

We learn, upon the authority of Miss Morris, that this fly is seen buzzing about the *ears* of the growing wheat; in the seeds of which it deposits its eggs. The very common belief that it is the animal found busy about the roots, is owing to the Ceraphron, which we mean next to describe, being mistaken for it; an error which the statement of Mr. Say, that the real Hessian Fly deposits its eggs under the sheath of the leaf, is liable to encourage.

The Ceraphron *destructor*, which has thus been mistaken for the Hessian Fly, is an Ichneumonide insect, or one of that numerous class that deposit their eggs in the bodies of others; and would, according to the less extended arrangements of earlier naturalists, have been, itself, called an Ichneumon. The injury we have just described, it actually inflicts on the Hessian Fly, and it is thus the mortal enemy of the animal for which it has been mistaken; an error not very uncommon. In the words of Mr. Say, "it seems probable that this insect prevents the total loss of our wheat crops by restraining the increase of the cecidomyia within certain bounds. True to the manners of its kind, the parent deposits her eggs within the bodies of the larvæ [considered by Miss Morris, pupæ,] of the Cecidomyia destructor, through a puncture made by her acute oviduct, for the purpose. The young, when dis-

closed from the egg, feeding securely within the body of the larva [pupa], at length kills it. Protected by this indurated covering, the parasite undergoes its change; and appears in the perfect state about the latter part of June."

This little fly belongs to the order Hymenoptera,—insects which resemble the bee or ant. It is shorter and thicker than the Hessian Fly; and when its wings are plucked, has great resemblance to a minute black ant; as the Cecidomyia without any mutilation, much resembles a little water-spider or Tipula. According to Mr. Say, the Ceraphron, after its eggs are deposited, throws off its wings, and crawls like an ant. This strange and wonderful process is said to occur in several analogous animals. The Ceraphron has been mistaken for the Hessian Fly because it has been found buzzing about the *roots* of the wheat, and piercing the sheaths of the leaves with its ovipositor; while, in fact, instead of placing its young so as to feed on the wheat, it was enabling them to feed on the Hessian Fly in its flaxseed form. We copy Mr. Say's description.

"Order HYMENOPTERA. Genus CERAPHRON. (Latreille.)

Antennæ infracted, moniliform, 10 or 12-jointed, basal joint long, cylindrical. Abdomen subovate. Inferior wings without apparent nerves. Superior wings with a costal nerve, and a single branch, forming an incomplete radial cellule.

CERAPHRON *destructor*. Black, granulated; abdomen glabrous, polished; feet and base of the antennæ whitish.

In the larva [pupa] of Cecidomyia destructor,

Head black, opaque, sometimes brassy, granulated over its entire surface; eyes not prominent, rounded in compliance with the curve of the head, and, with the stemmata, red-brown; *antennæ* pale brown, furnished with short, cinereous hairs, the two basal joints pale yellowish; the terminal ones in the male a little dilated and approximated, so as to form an obvious ovate [obovate?] acute (?) mass. *Thorax* with the granula equal to those of the head; black, usually brassy before the line of the base of the wings; nerve of the *wings* pale brownish; *feet* whitish, with black apophyses. *Abdomen* ovate-acute, perfectly black, highly polished, and furnished with a few short hairs; the segments of the base are sometimes pale yellowish or testaceous.

Length one tenth of an inch."

Ceraphron, from keras or ceras, a horn, and aphron, froth or sweat, means "frothy horn" or "sweaty horn;" and the reason for giving the name does not appear from Mr. Say's description.

For the Farmers' Cabinet.

Farmers' Visits.

MR. EDITOR,—I am just returned from a short sleigh tour amongst my brother farmers, which I have taken at the suggestion of a writer in one of the late numbers of the Cabinet, and have verified the truth of the position, that "the best money which a farmer can expend is in visiting his neighbours at a season of leisure," for I am returned 50 per cent. wiser than when I went, and 100 per cent. more contented with the lot that Providence has assigned me, and all at comparatively a trifling cost; for I may truly say, I did not visit a house where I did not find a home, even amongst strangers, who, on becoming acquainted with my business, entered heartily into it; and I am much mistaken if this be not the best mode, after all, by which an infinity of good is to be given as well as gained; and often, indeed, had I to admire the application of the scripture sentiment, "Iron sharpeneth iron—so doth the countenance of a man his friend," for I am amazed when I reflect upon the quantity of valuable information which I have acquired, and, if I may believe my friends, they have not benefited less by my visits than I have—a very pleasant reciprocity of generous sentiment and kind feeling.

But to tell the truth, one object, and indeed the main one with me, was to ascertain how far my neighbours were provided with provender for a winter, which, from its early presage, seems likely to be one of the most severe that we have experienced for many years, and I tell you at the outset, I have witnessed scenes which have given me the heartache—indeed it would not be difficult for me to make a picture-book of the "lights and shades" of character, and circumstances corresponding therewith; but to be able to do this, it is necessary to see and judge for one's self, for it is not easy to *conceive* the difference between good and bad management, which is as wide as that of summer and winter—by the bye, not a bad illustration—the plenty, warmth, light and summer sunshine of one establishment, contrasting most remarkably with the hunger, cold, poverty and winter darkness of another, rendering the light and shade palpable, even to a blind man; for I declare, the voices of the animals on these respective farms were unlike, depicting, in a remarkable manner, the difference pointed out in the Dialogues, at page 27 of the 67th number of the Cabinet, between observation and reflection—the cheerfulness of the morning and the gloominess of the evening; the voices of the poor and wretched animals, in many cases unsheltered and unfed, being in the minor key even to the roosters!

But no class of animals called forth my commiseration so much as the poor sheep, which seem too generally to be consigned to the care of a divine Providence; few, comparatively, ever thinking that they require or deserve regular food or shelter! no wonder that they are by many considered a worthless description of stock, for indeed in many cases they are so, nature not having endowed them with the power of withstanding the temptation to supply themselves with food wherever it might be obtained, preferring to do this rather than to die of starvation; and we all know that a sheep without food soon grows small enough to pass through a very small hole. But I believe that sheep-farming, on a much more extended scale than has ever yet been carried on in this part of the country, would prove far more profitable than very many of the crops that are cultivated, at a far greater expense of labour and care; yet to do this profitably or comfortably, preparations must first be made, which are adapted to the business; these and a due regard to the size of enclosures, and the fencing and shelter requisite; as well as a proper *succession* of crops, and above all, a plentiful supply of winter food, both roots and hay. But all this is easily had and obtained, and no stock pays so well in manure, which, as has been said, they not only carry abroad, but spread gratuitously; and assuredly, none pay so well for extra care and management, for where plenty of good food and shelter is provided, the ewes may be put to the bucks a month sooner than customary, and the price of fat lamb in the market a month earlier than usual, would bring an *unusual* price, besides which, there would then be time to fat the ewe after, upon the summer crops, securing likewise an early market for first-rate mutton.

With regard to the proper size of the fields, these might be *graduated* by the simplest of all methods, and in the way which is practised in some of the sheep districts in Europe, with the greatest ease and facility, by placing temporary fences across the lands, the work, oftentimes of a couple of hours only; these fences are formed of hurdles made of very light materials, four bars in height and 16 or 18 feet in length, the head piece of one end being tenoned into a short axle of wood, about two feet long, with two small wooden wheels of four inches wide, upon which the hurdle is trundled along to the place where it is required, with the greatest ease and facility, and is fixed in a moment, by the shepherd making a hole in the ground with his iron bar, exactly at the spot to receive the bottom part of the other head of the hurdle, which must be made sharp and tapering for this purpose, observing to place these hurdles alternately, *wheels to point*, when they require no more care or fastening than tying. These temporary fences should be removed occasionally, for no one would easily conceive the advantage it is to the flock to be changed from one pasture to another; a few days being often sufficient to sweeten an old enclosure, when they will return and eat their rejected food with avidity.

But shelter is as necessary, oftentimes, as food, and the well-being of the flock depends more on this, than very many would imagine — indeed this must sound strange to those who suppose—as has already been said—that sheep neither require nor deserve such treatment: those however, who have witnessed the quantity and quality of the wool of a flock which has been well sheltered, need not be told this. Now nothing makes a better shelter than a few of these wheel-hurdles, covered on one side with very thin boarding, which might extend a foot or so above the top rail; these can easily be removed to the point from whence the storm comes, and under the lee, the sheep will congregate and weather it out, most comfortably; their advantage to the flock being a hundred fold greater than all the labour, and expense of the hurdles, twice told: but these boarded shelters must be placed outside the hurdles, else the sheep will soon demolish them, by rubbing against them.

But I am aware that many will smile at the idea of erecting fences for shelter in the fields, for any kind of stock; if, however, they will try the value of such a provision, they will rejoice to witness the advantage which it is to their animals, and be surprised to find at how little cost the arrangement has been made. Still, I admit that the advantages of such a climate as that which our middle States give us are very great, and that, comparatively speaking, we know but little of the horrors which are oftentimes felt in other countries; but even here, we have all known the time, when every kind-hearted man must have been grieved to see his poor animals ranged under the shelter of an open fence, wet and shivering to the bone, and eyeing the storm with a deadly cast of countenance, enough to make an *honest* man shudder. Assuredly, no one is justified in exposing any part of his family to these cruel hardships, when the means are so readily in his power to alleviate them. And as it might possibly awaken their sympathy, or rather their gratitude, for "the lines that have fallen to them in such pleasant places," were they to read an account of a storm which fell on a part of the Cheviot Hills in Scotland, in the year 1794, now reprinted in Low's grand work on British Cattle, from the Ettrick Shepherd's Tales, I beg to copy it for your pages; after which, if they do not rise up with a more grateful heart for the blessings

which they enjoy in this favoured country, they do not deserve them. I can vouch for the truth of the narration, so far as having heard the storm described by Scotch shepherds who were on the spot at the time, and suffered the horrors of that frightful night; several of their companions having been overwhelmed by it and lost.

SUBSCRIBER.

15 Dec. 1840.

NARRATIVE OF A SCOTCH SNOW-STORM.

"But of all the storms that ever Scotland witnessed, or, I hope, ever will again, there is none that can once be compared with that of the memorable night between Friday the 24th, and Saturday the 25th of January, 1794; and which fell with peculiar violence on that division of the south of Scotland that lies between Crawford Muir and the Border; in these bounds, seventeen shepherds perished, and upwards of thirty were carried home insensible; the number of sheep that were lost far exceeded any possibility of calculation; whole flocks were overwhelmed, and no one knew where they were, until the snow was dissolved, when they were all found dead. I saw twelve scores of excellent ewes, all of one age, lying dead, all with their heads one way, as if a whole flock had dropped dead, going from the washing! many hundreds were driven into the rivers by the violence of the storm, and these the floods carried away, so that they were never found at all. The greater part of these rivers, on which the storm was most deadly, run into the Solway Frith, on which there is a place called the Beds of Esk, where the tide throws out and leaves whatever is carried into it by the rivers: where, after the storm subsided, there were found on that place, and shores adjacent, 1840 sheep, 9 cattle, 3 horses, 2 men, 1 woman, 45 dogs, and 180 hares, besides a vast number of smaller animals.

"I went to bed in the byre-loft, where I slept with a neighbour shepherd, Borthwick; but, although fatigued with walking through the snow, I could not close my eyes, so that I heard the first burst of the storm, between one and two o'clock, with a fury quite inconceivable and indescribable! It began all at once, with such a tremendous roar, that I imagined it a peal of thunder, until I felt the house rocking to its foundations. In a few minutes *I thrust my naked arm through the roof*, in order, if possible, to ascertain what was going on without, for it was perfect darkness — but I could not then, nor can I now, express my astonishment — I felt as though I had thrust my arm into a body of snow. I deemed it a judgment from Heaven sent upon us, and went to bed again, trembling with agitation. After three quarters of an hour, I rose and went to the house, where I found our master, the ploughman, Borthwick, and two maidservants, sitting round the kitchen fire, with looks of dismay and despair! we agreed that the sooner we could reach the sheep, the better chance we had to save a remnant; we therefore resolved to make a bold effort, and endeavour to reach an excellent lot of 800 ewes, which lay a long way distant. Our excellent master made family worship a duty never to be neglected, but that morning the manner in which he expressed our trust and confidence in Heaven, was particularly affecting. We then took our breakfast, filled our pockets with bread and cheese, sewed our plaids about us, tied down our hats with napkins coming under our chins, and each taking a strong staff in his hand, we set out on our attempt; but no sooner was the door closed upon us than we lost sight of each other — it was impossible for a man to see his hand held up before him, and it still wanted two hours till day-light — we had therefore no means of keeping together, but by following to one another's voices, nor of working our way, save by groping before us with our staves—a hopeless concern, for ere we got clear of the houses and hay-stacks, we had to *roll ourselves* over two or three wreaths or banks of snow, which we found it impossible to wade through; and all the while the wind and drift were so violent, that every two or three minutes we were compelled to hold our mouths between our knees, to recover our breath; and then we got into an eddying wind that was altogether insufferable; at the same time we were struggling amongst snow so deep, that our progress in the way we should go was quite equivocal, having by this time lost all idea of east, west, north, or south. Still we were determined, and persevered, not knowing whither, sometimes rolling over the snow, and welter-ing in it up to the chin. There was an enclosure around the house to the westward denominated the "Park," which did not extend to more than three hundred yards beyond it, but to this small space were all our exertions confined until daylight — two hours after we had left the house! —

"After we got clear of the Park, we also got free of the eddy of the wind, which now drove full in our faces; we therefore proceeded in a line one before the other, changing places every two or three minutes; and at length, after the greatest fatigue, reached the ridge of a long hill where the snow was thinner, having been blown off by the force of the wind, and by this, we hoped to reach to within a short space of the ewes, which were still a mile and a half distant. Our master had taken the lead; I was next him, but soon began to suspect, from the depth of the snow, that he was leading us quite wrong; but as we always trusted implicitly to the person that was foremost for the time, I said nothing, until satisfied that we were going in a direction very nearly opposite to that we intended; I then tried to expostulate with him, but he did not seem to understand what I said, and on getting a glimpse of his countenance, I perceived that it was quite changed! Not to alarm him or the others, I said I was becoming terribly fatigued, and proposed that we should lean on the snow and take each a little spirit (having brought a small quantity with me, fearing the worst,) and some bread and cheese: this was unanimously agreed to, and I remarked that he swallowed the spirit rather eagerly, a thing not usual with him; and when he tried to eat, it was long before he could swallow a morsel: I felt convinced he would fail altogether, but as it would be easier to get him to the shepherds' house—which was before us—than home, I made no proposal to return, but said, if they would trust themselves to me, I would engage to lead them to the ewes without going a foot out of the way; to this the other two consented, acknowledging they knew not where they were, but he never opened his mouth, nor did he speak a word for two hours after: it was only a temporary exhaustion, however, for he recovered, and wrought *until night* as well as any of us, but could never recollect a single circumstance that occurred during that part of the journey. At half-past ten we reached the sheep, just in time to save some of them. It was now wearing towards midday, and there were occasionally short intervals, when we could see around us, perhaps for twenty yards; I grew quite impatient to find my own charge, and, leaving the rest, I went away to them myself; I found them in miserable circumstances, but by making the greatest exertions, I got about one-half of them out of the snow, and left them in a place of safety, and made towards home, for it was growing dark, and the storm was again raging in all its darkness and fury. I was in no fear of losing my way, for I could have found it with my eyes bound up, and, indeed, long before I reached home, they were no use to me. I was terrified for the water, (Douglas Burn) for in the morning it was flooded and gorged up with snow in a frightful manner, and I was fearful it was now quite impassable; at length I came to a place where I thought the water should be, and fell a boring and groping with my long staff, but no water could I find; I then began to dread, that in spite of my supposed accuracy, I had gone wrong: this greatly surprised me, and, standing still to consider, I looked up towards Heaven—I shall not say for what cause—and, to my utter amazement, thought I beheld trees over my head, flourishing abroad over the whole sky! I never had witnessed such an optical illusion before; it was so like enchantment that I knew not what to think, but felt the dread that some extraordinary thing was coming over me, and that I was deprived of my senses! I concluded that the storm was a great judgment, sent on us for our sins, and that this strange phantasy was connected with it—an illusion effected by evil spirits! I stood a good while in this painful trance, but at length, on making a bold exertion to escape from this fairy-vision, I came, all at once, in contact with the Old Tower!—never in my life did I experience such relief! I was not only all at once freed from *the Fairies*, but from the dan-

gers of the gorged river, for I had come over it on some mountain of snow, I knew not how or when, nor do I know to this day; so that after all, what I had seen *were* trees, and trees of no great magnitude either; but their appearance to my eyes it is impossible to describe: I thought they flourished abroad, not for miles only, but for hundreds of miles, to the utmost verge of the visible heavens! Such a day and such a sight may the eye of a shepherd never see again!

"Next morning the sky was clear; the form of every hill was changed, and new mountains leaned over every valley—all traces of hill, valley, river, and lake were obliterated. When we came to the ground where the sheep should have been, not one was to be seen above the snow; here and there were to be seen the head or horns of a straggler, but after recovering these few, we could see no more; they were buried as they had been living, under an uniform covering of snow, from six to eight feet deep, scattered over at least one hundred acres of heathery ground: we went along, boring with our long poles, scarcely finding one sheep in a quarter of an hour, but at length, a white shaggy *Colly*, that belonged to the cowherd boy, seemed to have comprehended something of our perplexity, for we observed him plying and scraping in the snow with great violence, and always looking over his shoulder for us: on going to the spot, we found that he had marked straight above a sheep: from that he flew to another, and so on to another, as fast as we could dig them out, and ten times faster, for he sometimes had twenty or thirty holes marked beforehand."

To the Editor of the Farmers' Cabinet.

Peach-Tree.

Sir,—I have a peach-tree in my garden which, at the time of flowering the past year, showed evident signs of premature decay. Having seen in the Cabinet that alkaline substances had been applied to the roots of trees when in these circumstances with great success, I opened the earth, poured soapsuds about the roots, and returned the pulverized soil—the effect was almost instantaneous, and although the application was not made in time to save the whole crop of fruit, a portion of it came to perfection, and was by far the finest and most luscious that it had ever borne. A neighbour, whose peach-tree grew so near that its branches almost touched mine, and was affected in the same way, but not to so great an extent, neglected to do as I had done; his crop of fruit all fell off when they had attained the size of almonds, and the tree itself is now entirely dead, while mine is more vigorous than ever, having, after the dressing of soapsuds, thrown out much new wood, which ripened well, and at the present moment its appearance is peculiarly healthy and vigorous. It might be added, I repeated the dose of soapsuds several times during the summer.

John Corney.

Philadelphia, 4th Jan., 1841.

To Correspondents.

Will "A Grain and Silk Grower" re-peruse the article which he notices—it might form the most satisfactory answer to his questions.

"Agricola's" paper on the *modus operandi* of Lime, demands, and will repay a most careful and considerate perusal and examination.

We beg "Observer" to accept our best thanks.

Doctor Coates's very interesting paper on the "Hessian Fly," is highly important at the present time, and will call forth, we doubt not, the most scrupulous investigation. We offer the pages of the Cabinet for the purpose of recording the views and experience of a very numerous and intelligent class of our readers, who feel a very serious interest in the subject. We are pleased to find that Miss Morris is continuing her investigations, and hope her labours will be crowned with success.

The quantity of rain and melted snow which fell during the

12th month, (December,) 1840, was....3.647 inches.

The quantity which fell during the

year 1840, was.....47.4 inches.

The average quantity which fell annually during the past ten years, ending with 1840, was..42.395 inches.

Those who desire to know the quantity which has fallen annually since 1810, are referred to page 186, vol. II., of the Farmers' Cabinet.

John Conrad.

Pennsylvania Hospital, 1st mo. 1, 1841.

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